

# ART AND ARCHAEOLOGY

THE ARTS THROUGHOUT THE AGES

*An Illustrated Monthly Magazine*

PUBLISHED BY

THE ARCHAEOLOGICAL SOCIETY  
OF WASHINGTON

AFFILIATED WITH  
THE ARCHAEOLOGICAL INSTITUTE  
OF AMERICA

ART AND ARCHAEOLOGY PRESS, INC.

VOLUME XXIII

JANUARY-JUNE, 1927



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TERMS: \$5.00 a year in advance; single numbers, 50 cents. Instructions for renewal, discontinuance, or change of address should be sent two weeks before the date they are to go into effect.

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Advertisements should be sent to the Advertising Manager, The Architects Building, 1800 E Street, N. W., Washington, D. C. European advertising may be sent to the London Office, Dorland House, 14 Regent Street, London, W. I.

Entered at the Post Office at Washington, D. C., as second-class mail matter. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized September 7, 1918.

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THE RESTORED FEATHERED SERPENT COLUMNS FLANKING THE MAIN ENTRANCE TO THE  
TEMPLE OF THE WARRIOR AT CHICHEN ITZÁ, YUCATÁN, MEXICO.

# ART and ARCHAEOLOGY

## *The Arts Throughout the Ages*

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VOLUME XXIII

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NUMBER 1

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### THE ART OF THE MAYA AS REVEALED BY EXCAVATIONS AT THE TEMPLE OF THE WARRIORS, CHICHEN ITZÁ, YUCATAN

By FRANK F. BUNKER

*Editor of the Carnegie Institution of Washington*

*Illustrated with photographs by E. L. Crandall, official photographer of the Chichen Itzá Project, and a 4-color plate*

THE work of excavating and reassembling the fallen structural elements of the Temple of the Warriors at Chichen Itzá, Yucatan, has now gone far enough to throw considerable light on the art of what perhaps was the most advanced aboriginal race of the New World. During the past two seasons, the Middle American Archaeological Staff of the Carnegie Institution of Washington, under the leadership of Dr. Sylvanus G. Morley, has focused upon this temple, now seen to have been one of the most important of all the structures of this ancient Mayan city. Indeed, in the wealth of its sculptured figures and in the variety and brilliance of its mural decorations, the Temple of the Warriors surpassed even El Castillo, the principal temple of Chichen Itzá.

Like other temples of Maya construction, the Temple of the Warriors is built on a pyramidal foundation. The supporting structure covers two-thirds of an acre and rises in four terraces thirty-seven feet above the general level of the great artificial terrace, covering some fifty acres, upon which the northern part of the city was built. A stairway thirty-four feet wide, containing thirty-six stone steps, ascends one face of the pyramid at the sharp angle of  $66^{\circ}$  with the horizontal. Two stone balustrades, four feet wide, carved to represent feathered rattlesnakes, the rattles at the bottom, the heads—with fanged mouths—at the top, flank the stairway and lead upward to the temple portal. Here two massive feathered serpent columns, with heads on the ground and tufted



ONE OF THE TWENTY SCULPTURED COLUMNS IN THE TEMPLE OF THE WARRIORS  
AT CHICHEN ITZÁ.

## ART AND ARCHAEOLOGY

tail-rattles rising fifteen feet above, divide the entrance into a triple doorway.

The temple building itself, which crowns the pyramid, as it stood before the ruthless forces of nature caused its collapse, consisted of two finely proportioned rooms, each thirty by sixty-one feet, enclosed by walls of cut stone. One of these rooms, the inner sanctuary, contains a painted stone bench with sloping back. Against its rear wall stands a superb altar, fourteen feet long, eight feet wide, and two and three-fourths feet high, which is supported by nineteen human figures of stone in colors, with arms raised, Atlas-like, above their heads. (*See page 11.*)

Twenty square stone columns once supported the vaulted roofs of the two rooms. Each of these columns is faced with sculptured figures of warriors in plumed helmets and armed with spears and clubs, originally vividly colored. It is these sculptured figures that suggested the name—Temple of the Warriors—by which the structure is known.

Everywhere present, portrayed in sculpture and in painting, is the feathered serpent, the conventionalized representation of the Toltec god, Quetzalcoatl, whom the Mayas called Kukulcan. This god was conceived of as a union of a bird and a rattlesnake, symbolizing the union of the god of the air and the god of the earth.

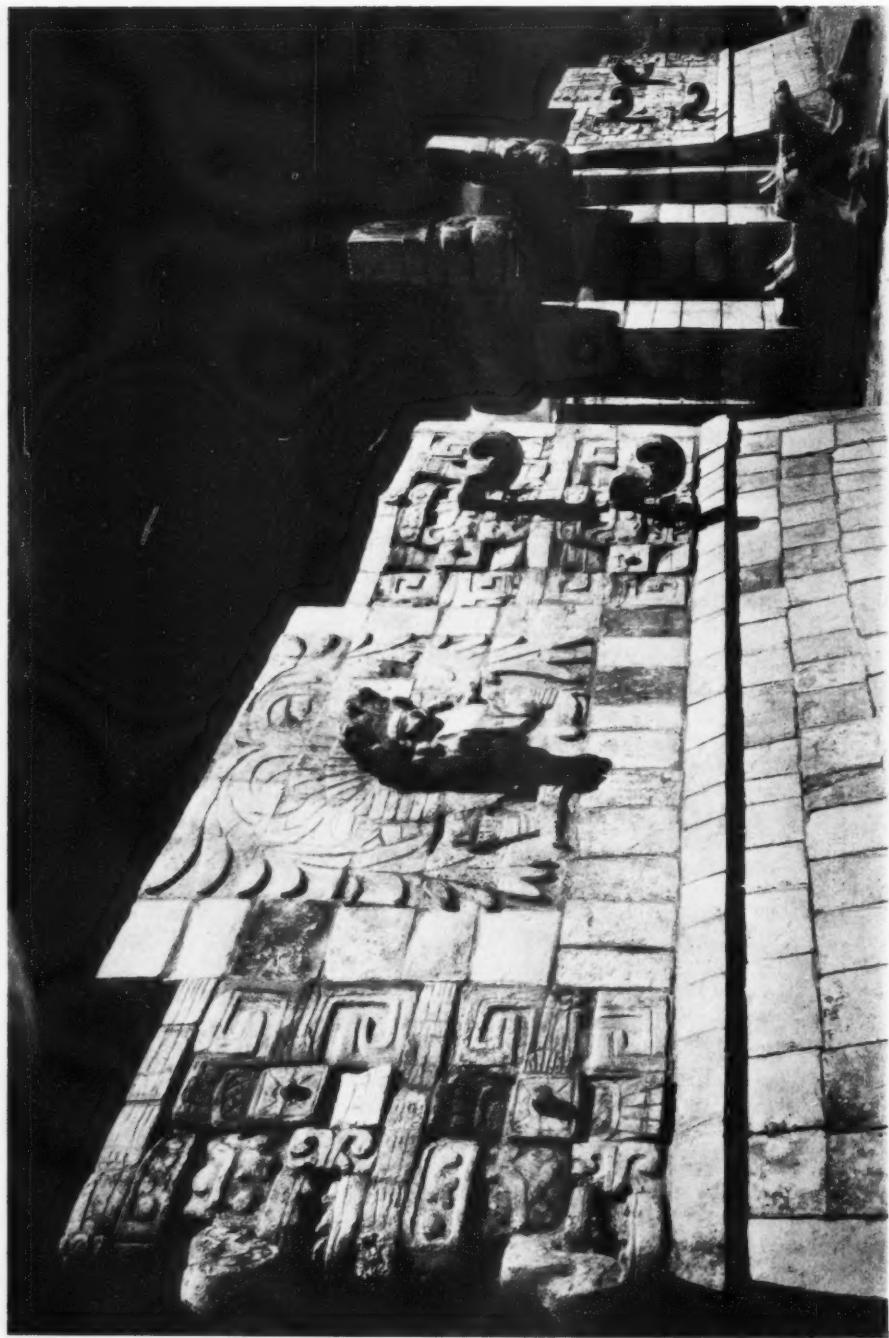
Mr. Karl Ruppert, assistant archaeologist, who has supervised the reassembling of the sculptured elements of the foundation and of the temple façade, states that each of the four terraces is composed of a sloping lower section of cut stone and a vertically rising cornice which carries a sculptured frieze of peculiar interest. On it appear in low but distinct relief alternating pairs of warriors, eagles, jaguars,

and an unidentified short-tailed, thick-haired quadruped which, for want of a better name, has been called the "Woolly". The warriors wear elaborate costumes which show traces of color, while the animals squat on their haunches and hold in their forepaws an object, thought by some to represent a human heart, which they seem to be offering to the warriors whom they face.

The sculptured elements of the walls of the temple proper which have thus far been replaced all belong to the lower zone of the temple façade. These elements consist of masks and of serpent-bird panels.

The masks are grotesque faces with curling noses built up of separately carved blocks. They vary somewhat in size but their average width is six feet two inches and their height three feet two inches. Each is made up of twenty-three or twenty-four separate stones. These masks were once elaborately painted in red, green, yellow, and blue. The mouths were in red; the lips in yellow or green; the ears in green to represent jade; and the earrings in red. The ornaments above and below the ears were painted red, blue or yellow; the eyes, red, yellow, or green; the eyebrows, green or blue. The head-band, representing three or four ribbons, was in blue, green, red and yellow.

The serpent-bird panels, of which six have been reassembled, average six feet five inches in height and six feet in width. These mosaic designs, symmetrically placed in the temple walls, consist of figures having bird feet and bodies with plumes rising to the top of the panel and gracefully falling on either side in complete arcs to its base. At the center of this balanced design is a serpent's head in full relief. The tongue of the serpent is bifurcated and



FAÇADE OF THE TEMPLE OF THE WARRIORS, SHOWING THE FEATHERED SERPENT COLUMNS FLANKING THE CENTRAL DOORWAY, AND THE ADJACENT DECORATIVE PANELS.

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hangs downward between the bird-like claws; while within the widely distended mouth appears a human head.

The background of these panels was painted red, the feathers red and green. The body of the bird surrounding the head is green with red trimmings, while some traces of red have been found on the jaws of the serpents.

Particular attention has been given to the sculptured columns inside the temple which once supported the roof. M. Charlot, one of the staff artists, devoted much of his time last season to their study and to the reproduction of the figures with which they are covered. He reports that these columns are built up of square drums of a soft white limestone set in mortar and that the joints are filled with stucco modelled so as to connect the sculptured designs without break. Each of the column faces is divided into three panels.

The bottom panel, almost square, contains the well-known representation of a Toltec god consisting of a human face held in the distended jaws of a serpent having bird-claws. The upper panel, also nearly square, contains a representation in profile of a god "diving" from a Toltec-like solar disk. This figure suggests, it is thought, that the protection of the gods is extended to the human figure on the principal panel below.

The middle panel is the most important of the three. In every case it contains a single human figure holding a bunch of spears in one hand and a spear-thrower in the other. The attitude of these warrior figures is more religious and ceremonial than belligerent, M. Charlot thinks.

In describing these carved forms, M. Charlot says: "The figures wear feather rings on their ankles and around their knees, and turquoise bracelets and

necklaces with metal *repoussé* bosses. The breast and right arm are bare while the left arm is carved with a kind of voluminous sleeve, possibly one of the cotton shields which were still being worn at the time of the Spanish conquest. There are nose- and ear-plugs of all shapes. The hair is long and braided, hanging over the shoulders. The headdresses are of elaborate feather work or of flowers, while many of them are represented as having the sacred bluebird on the forehead. Some of the figures are disguised as birds, with bird claws and bird masks, probably representative of the owl, eagle or *quetzal*.\* One figure wears the Mexican tiger headdress with a human face inside the jaws. Another wears a skull-mask with fleshless teeth and a flint in the hollow nose. Priests offer objects shaped like small loaves of bread but which, in all probability, represent cakes of copal incense. Still others personify the god himself, their faces concealed behind a mask of the god's face, which has a long ornamental nose."

In discussing the technique of the Mayan artists, M. Charlot reports that the sculpturing was done after the stone drums comprising the columns were in place. A stone tool was used, a little harder than the stone of the columns. With this the outline and detail of the figures were brought out by cutting away the background a centimeter or two.

Following the sculptor came the painter, who filled in backgrounds with a dull red pigment obtained from an indigenous tree. For the borders around the figures a color very near a cerulean blue was used. To bring out various details of form and dress, greens, yellows and blacks were employed. The sculpture was further en-

\* The sacred *quetzal* is a member of the bird of paradise family.

## ART AND ARCHAEOLOGY

riched by insets of mother-of-pearl, obsidian and probably colored beads, as the empty eye-sockets in the surface of the blocks suggest. Indeed, M. Charlot discovered one figure in the temple sanctuary with the eye still in place. Upon examination, he found that it was composed of mother-of-pearl with a small disc of obsidian set at the center to represent the pupil.

Turning to the interior walls of the temple, Dr. Morley and his staff have found that originally these were likewise brilliantly and elaborately decorated, but with scenes drawn from the life of the people. Some of these are simple and peaceful, depicting life at the seashore or showing the people as they pursue the routine of daily duties; while others are horrible and tragic, as when spectacles of human sacrifice are portrayed in gruesome detail. All, however, are dominated by the omnipresent bird-serpent. The stones composing these structural elements were found by the excavators to have fallen in a confused mass, perhaps centuries ago. Gradually, however, the patient efforts of the workers are being rewarded. Already encouraging progress has been made in restoring the mural paintings. In this task Mrs. Ann A. Morris, another of the staff artists, has done notable work.

As each stone which bore painted plaster on its surface was dug out, it was numbered. Then a color reproduction was made of the bit of design which it carried. These designs were then drawn to scale on paper. By manipulating these papers, Mrs. Morris was able to fit certain of them together into a consistent whole. In this manner, of the thousand or more stones copied, she has been able to reconstruct the paintings of two different expressions of Mayan life; one, a peaceful

village scene at the seacoast; the other, a more sinister spectacle in which a human sacrifice is offered to the bird-snake god.

The first of these paintings, twelve and one-half feet long and seven feet high, originally contained sixty-six stones, of which number fifty-seven were recovered and replaced in their proper positions.

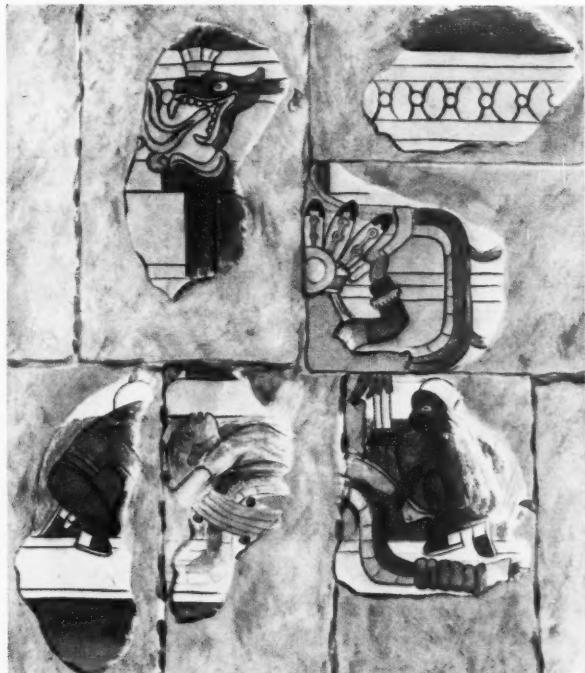
In the scene depicted, canoes, containing two warriors and a paddler, are shown as though moving along a shore on which stands a village where many people are variously occupied. One woman is grinding corn; another is watching a boiling pot. A man is seen carrying a burden, while another is poised as though about to hurl a spear. Crabs, lobsters, and snails float or swim about, while on land birds and trees are pictured. The painting originally was resplendent in brilliant colors; moreover, the drawing is done with much naturalness.

In the second picture (*see colored plate*) a sacrificial victim lies stretched at full length across the convex surface of one of the coils of an immense feathered serpent bearing conspicuous tail-rattles. Assistants hold his hands and feet while beside him stands an officiating priest in black with knife upraised ready to strike the fatal blow preparatory to tearing out his heart. Coiling around the priest, the great serpent, in whose honor, it may be supposed, the bloody rite is performed, with widely distended jaws and protruding fangs, rears his great plumed head high above the barbaric scene.

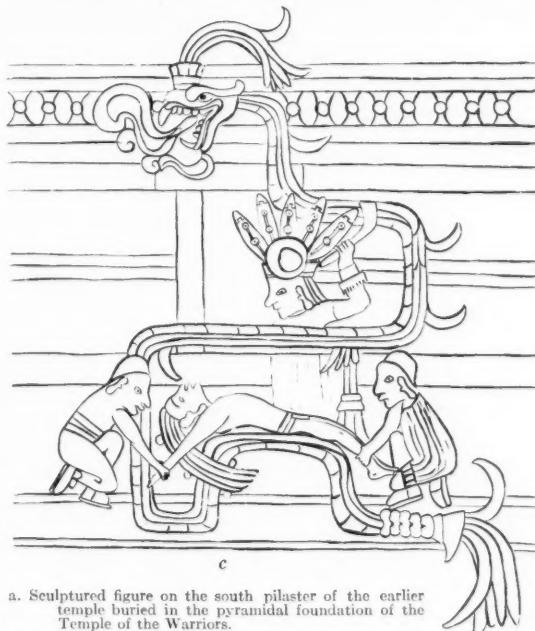
Mr. E. H. Morris, archaeologist in immediate charge of excavations at Chichen Itzá, has made a particular study of methods the Mayan artists employed in applying their color. He says that they first surfaced their walls



a



b



c

- a. Sculptured figure on the south pilaster of the earlier temple buried in the pyramidal foundation of the Temple of the Warriors.
- b. Interior mural painting of the Temple of the Warriors showing a human sacrifice.
- c. Drawing of the same with tentative restorations.

(Illustrations approximately one-ninth original size. Copied from the originals by Ann A. Morris.)  
(Courtesy of Carnegie Institution of Washington)



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with lime plaster of a fine, smooth texture, and while this was still wet a general background of solid color was applied. The designs were then painted flat against this background in a great variety of hues, all, however, being based on a few fundamental colors such as red, yellow, green and blue. As a final step in the process, each detail of the picture was re-outlined in

sharpness of the pigments. Without detracting from the brilliance of the original colors, it has enriched and mellowed them. As the entire temple is studied, section by section, the evidence increasingly persuades one that a great number of artists took part in its mural decorations. The individualistic treatment of subject, coloration, drawing, and general skill add further



SECTION OF SCULPTURED FRIEZE ON THE TEMPLE OF THE WARRIORS, SHOWING FIGURES OF WARRIORS, JAGUARS, EAGLES AND BEARS, ALL HOLDING HUMAN HEARTS IN THEIR HANDS, PAWS AND CLAWS.

black. Except for the reds—which could have been obtained from the bark of a certain tree—Mr. Morris states that he has been unable to determine the source of the colors, nor does he know what the medium was in which the pigments were mixed. He adds:

"The interior of the temple in ancient times must have presented a sight of barbaric splendor, an almost bewildering array of intricate designs in brilliant colors. Time has softened the

interest to the interpretation of the paintings."

It seems incredible that a race to whom iron was unknown could have carried the art of sculpture to such development as the pick and shovel have revealed at Chichen Itzá. The examples the excavators are recovering bear striking witness not only to the infinite patience of the ancient artists and their skill in execution, but to their intuitive perception of many of the principles of fine art. Indeed, it has

## ART AND ARCHAEOLOGY

been conjectured that this development may have reached the stage of portraiture in stone, since the faces carved on the door-jambs and on the Atlantean figures supporting the altar are of such variety and character as to suggest that they may have been actual portraits of living people.

A study of the art elements of the Temple of the Warriors can well be summed up in the words of M. Charlott:

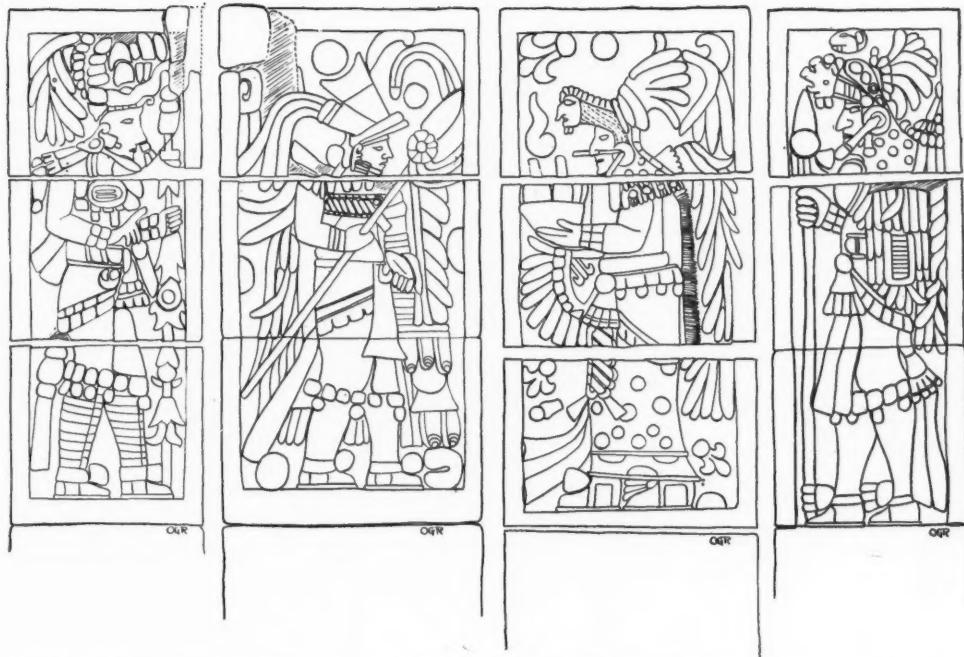
"If it be true that all art evolution passes first through a period called primitive, when strong and unique



ATLANTEAN FIGURE, ABOUT 3 FEET HIGH; ONE OF 19 SIMILAR SUPPORTS OF THE DAIS, THRONE OR ALTAR IN THE SANCTUARY OF THE TEMPLE OF THE WARRIORS.

der an apparent carelessness a perfect convention rules representation, next knowledge of perspective, points also through a period of classicism, when to this last stage."

nature and style are fairly equilibrated, and finally through a period of eclecticism, when the artist works freely, accepting what he wants from past tradition, then the columns in the Temple of the Warriors are certainly of this third period. No special convention rules them. The sculpture represents with the same mastery, the beauty of a young warrior and the ugliness of an old woman, characteristic of this last stage in art evolution. Furthermore, the pseudo-primitivism of the line which conceals un-



DETAIL SKETCHES (LEFT TO RIGHT) OF THE NORTH, WEST, EAST AND SOUTH FACES OF COLUMN 4, NORTHEAST COLONNADE, COURT OF THE THOUSAND COLUMNS, CHICHEN ITZÁ.

## SIXTEEN CARVED PANELS FROM CHICHEN ITZÁ, YUCATAN

By EDITH BAYLES RICKETSON  
*Illustrated with drawings by O. G. Ricketson*

THE accompanying figures are scale drawings of the sculptured columns of the Northeast Colonnade of the Court of The Thousand Columns at Chichen Itzá in Yucatan, Mexico. They illustrate a type of Maya sculpture common in that city.

The Court of The Thousand Columns was an enormous construction covering, with all its parts, more than twenty acres. The Court itself contains five acres of ground, and is surrounded on all sides by temples and colonnades of various sizes. The north and west sides of the Court are bounded by two long colonnades of round col-

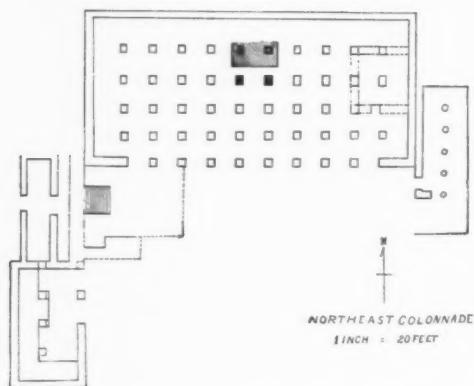
umns with square capitals, each five columns in depth, and the south and east sides are bounded by buildings more complex. Most of these have not been excavated.

The Northeast Colonnade was excavated in 1924 by the Chichen Itzá Project of the Carnegie Institution of Washington, under the direction of Dr. Sylvanus G. Morley. This building faces south on a small square just east of the Court of The Thousand Columns. It is 100 feet long, 49 feet wide, and 19½ feet high, and rises from a low terrace, two feet above the level of the square. It is composed of 48 square

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columns (see ground plan, Fig. 2) arranged in five tiers, with ten columns in each tier except the front one, where the two end walls (*antae*) occupy the space of one column each.

The eight columns across the front divide the façade into nine doorways.



PLAN OF THE NORTHEAST COLONNADE, COURT OF THE THOUSAND COLUMNS, AT CHICHEN ITZÁ.

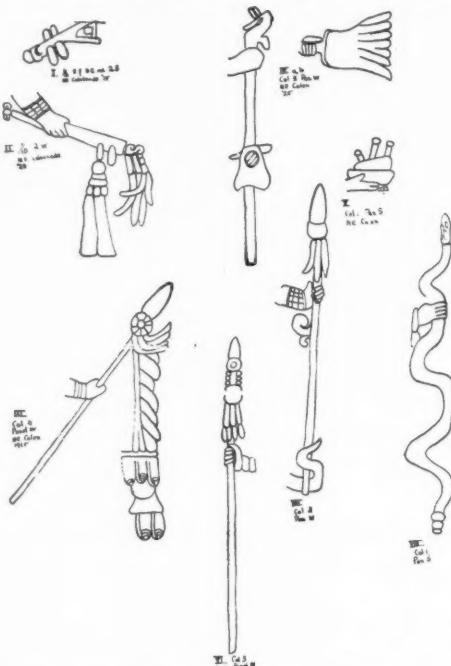
All the columns are made alike, in sections composed of large dressed blocks of limestone, and all are plain except the four central ones at the back, which are elaborately sculptured and enclose a sculptured platform or throne.

The throne is  $13\frac{1}{4}$  feet wide across the front,  $7\frac{1}{4}$  feet deep to the back wall, and 3 feet high. The front and sides of the throne itself are composed of intricately carved stones, each about a foot square, representing priests and warriors, and are surmounted by a sculptured cornice representing intertwining rattlesnakes.

Two of the sculptured columns stand before the throne, on the floor of the colonnade, and two rise from the throne itself. All four sides of each of these four columns are sculptured, making a total of sixteen panels.

Most of the subjects are warriors, elaborately clothed in feather-work, embroidered cotton stuff, jade and gold jewelry, and armed with spears, clubs, and shields. An interesting exception is the front of the back column at the left of the throne, which is carved with the representation of Kukulcan, the Feathered Serpent, whose likeness is to be seen everywhere in this part of the city.

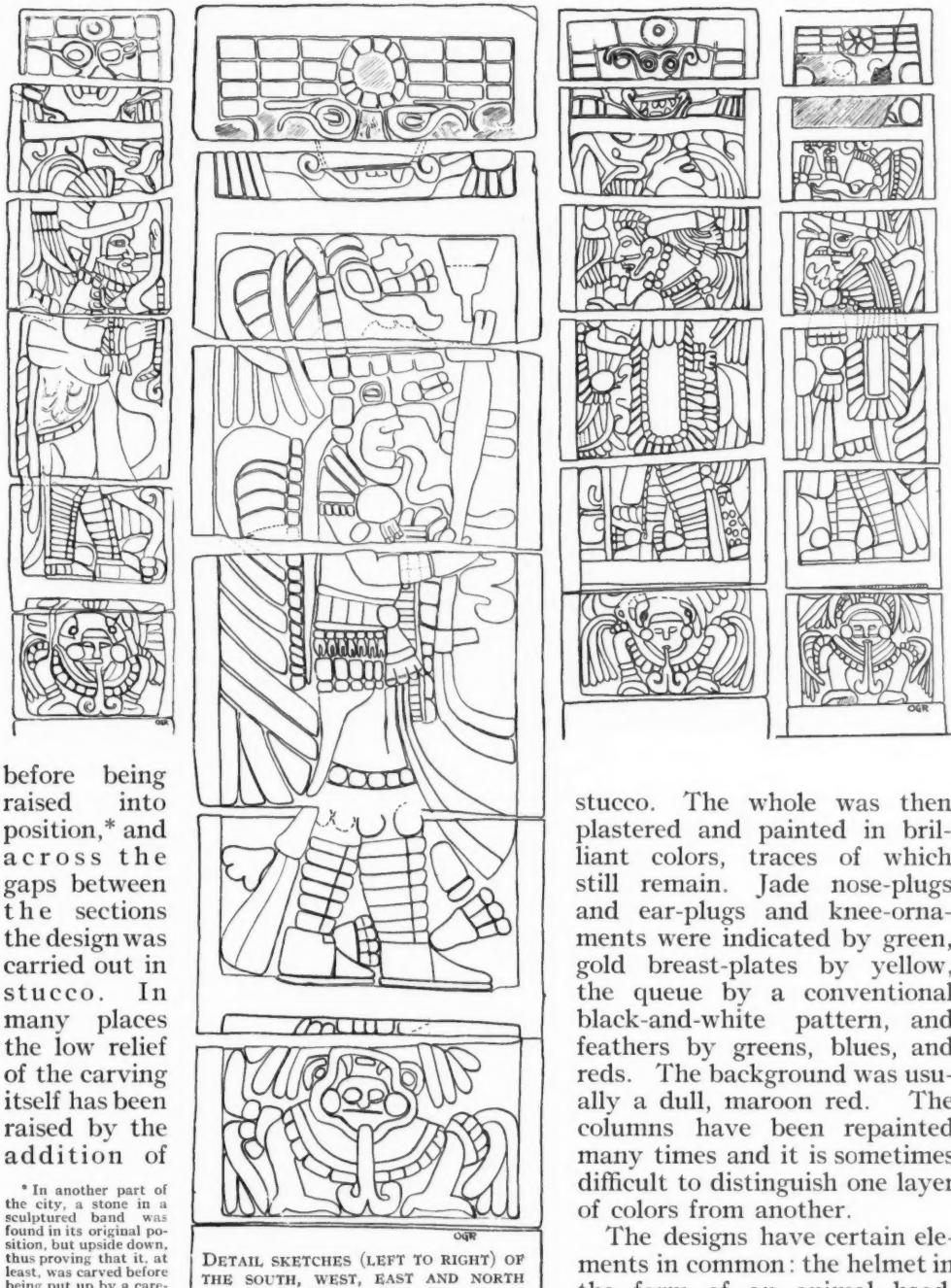
Both the subjects and the style of carving on these columns and the throne indicate that they were exe-



DETAIL DRAWINGS OF CARVINGS ON COLUMNS 1, 2, 3 AND 4 OF THE NORTHEAST COLONNADE.

cuted at a late period in the history of Chichen Itza. Certainly they were produced after 1200 and before 1450 A. D., and probably nearer the latter date than the former.

The technique is simple. The various sections of the columns were carved



DETAIL SKETCHES (LEFT TO RIGHT) OF THE SOUTH, WEST, EAST AND NORTH SIDES OF COLUMN 1, NORTHEAST COLONNADE.

before being raised into position,\* and across the gaps between the sections the design was carried out in stucco. In many places the low relief of the carving itself has been raised by the addition of

\* In another part of the city, a stone in a sculptured band was found in its original position, but upside down, thus proving that it, at least, was carved before being put up by a careless or stupid mason.

stucco. The whole was then plastered and painted in brilliant colors, traces of which still remain. Jade nose-plugs and ear-plugs and knee-ornaments were indicated by green, gold breast-plates by yellow, the queue by a conventional black-and-white pattern, and feathers by greens, blues, and reds. The background was usually a dull, maroon red. The columns have been repainted many times and it is sometimes difficult to distinguish one layer of colors from another.

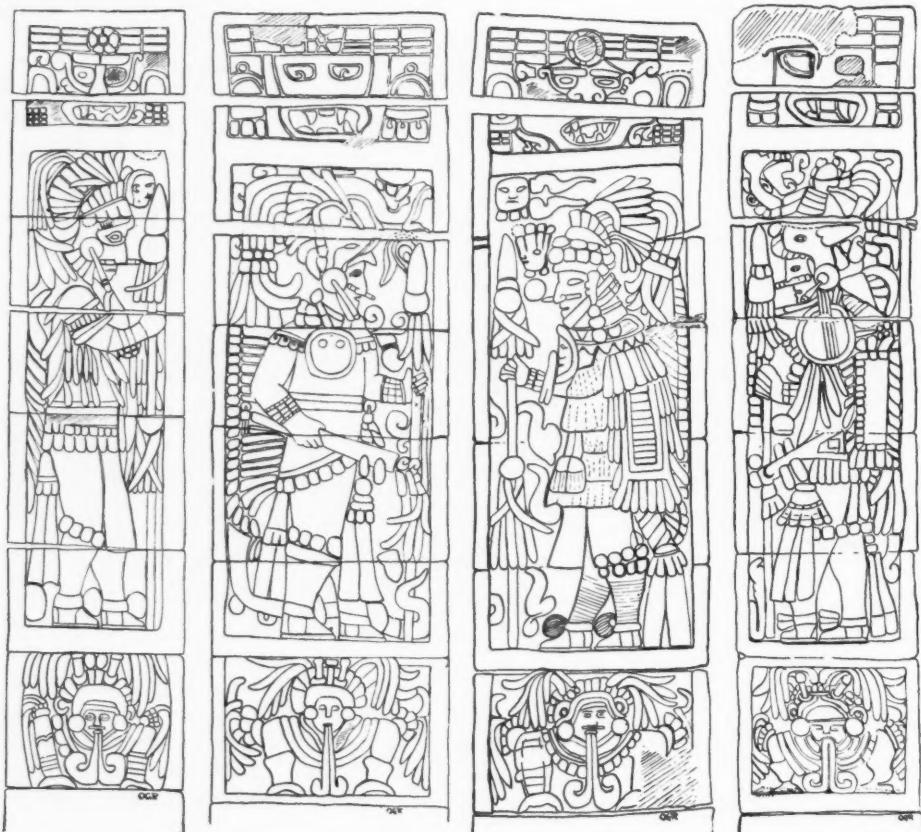
The designs have certain elements in common: the helmet in the form of an animal head,

## ART AND ARCHAEOLOGY

the plumed head-dress, the long nose-plug and ear-plugs, the queue, the feathered cloak, the *maxtli*\* (loin cloth), decorated with long tassels, the striped or rolled leggins, the tasselled sandals, and the feathered

as is possible, the sculptures are portraits—or the historical event, town, or quality the warrior represents.

The topmost section of each column represents a grotesque jaguar's face and forepaws. The lowest block, upon



DETAIL SKETCHES (LEFT TO RIGHT) OF THE NORTH, WEST, EAST AND SOUTH FACES OF COLUMN 2, NORTHEAST COLONNADE.

serpent that usually encircles the whole. From these it is easy to form a fairly clear and sure picture of the outfit of a Toltec-Maya chieftain in full regalia. Above the heads of a few of the figures are undeciphered glyphs. These may indicate the name of the warrior—if,

\* Pronounced mash-tlee.

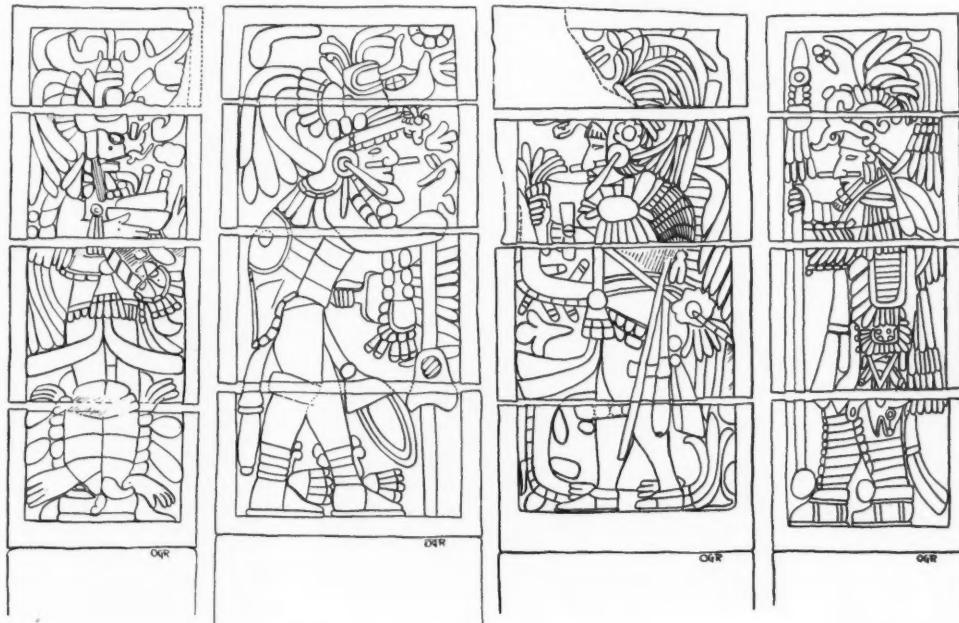
which the figures stand, represents a snake's head with a human head in its open jaws, the serpent's tongue issuing from beneath the human chin. These serpents are all shown as possessing legs, and might better be called "feathered monsters."

An interesting study is a comparison

## ART AND ARCHAEOLOGY

of the objects held in the hands of the different figures. There are eight spears, five staffs, presumably ceremonial (two are in the form of serpents, one of which may represent a living serpent itself), two bowls of copal incense, ornamented with jade beads,

tured columns show a strong Toltec influence upon the ancient Maya art. Though there is a great difference in the quality of both design and execution in the different columns, some being much more graceful and compact than others, even the best of these is not



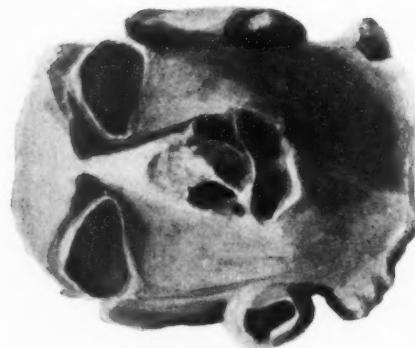
THE FOUR SIDES OF COLUMN 3, NORTHEAST COLONNADE. FROM LEFT TO RIGHT THE CARVINGS SHOW THE SOUTH, WEST, EAST AND NORTH FACES OF THE COLUMN.

one fan, and one object which might be either a torch or a conical incense burner.

The only one of the sixteen figures recognizable as a deity is that on Column 3, Panel S. (see above), which probably represents Kukulcan, or God B. This figure is one of the two bearing incense and not a weapon. The other figure bearing incense (Column 4, Panel E.) (page 12), is the only one with a long, skirt-like robe, and may be supposed to represent a priest rather than a warrior or a chieftain.

As already mentioned, these sculp-

comparable for delicacy of style with the earlier work of Maya artists, such as we find in Palenque and other cities of the Old Empire. The work in these columns shows a strong tendency towards conventionalization, although it had not yet reached a stage where symbols were used for the objects to be depicted. The human figures, as a rule, are fairly free, though crude, but the ornament is so overburdened with scrolls and coils—purely decorative in purpose, so far as we can judge—that it is often difficult to decide where one element leaves off and another begins.



A COMPARISON BETWEEN THE PRESENT-DAY MAYA AND THE CLAY AND STONE FIGURES  
AND HEADS DATING FROM ARCHAIC AND NEO-ARCHAIC TIMES IS ILLUMINATING.

# CULTURAL EVOLUTION IN GUATEMALA AND ITS GEOGRAPHIC AND HISTORIC HANDICAPS

By MANUÉL GAMIO

(Translated from the Original Spanish by Arthur Stanley Riggs)

## PART II: COLONIAL AND MODERN EVOLUTION

**A**T the beginning of the second quarter of the XVIth century the Spanish conquerors appeared in Guatemala, headed by the sanguinary Don Pedro Alvarado, whose sword was already red with Aztec blood. Falling upon the unhappy region in a devastating torrent, the invaders decimated the inhabitants, and caused the indigenous civilization to disintegrate completely, without taking into account the indispensability of its collaboration for the proper development of their colonization. They also overlooked the fact that that culture, product of the local experience of thousands of years, must inevitably be for the newcomers a precious book by whose perusal they could learn to adapt themselves most efficiently to the conditions of life in these new lands they were touching for the first time. Unfortunately, the colonizers believed their ideas and systems were the best. Disdaining everything from the native but mere personal labor, they initiated an exotic regime which endured some four hundred years. The autochthonous civilization, on its part, evolved in the descending scale: that is, it degenerated and disintegrated, not alone because it was losing its most brilliant pre-Hispanic characteristics, but because the cultural elements introduced by the Spaniards were very superficial and scanty.

The white colonists took no account of and conceded no importance to the interesting experimentation the Maya

and their ancestors had been making for centuries with a view to selecting non-seismic regions for the construction of their cities. Accordingly the most densely populated centres of colonization were established in the eruptive cordillera, in which the earth practically never ceased to tremble and where volcanic eruptions were frequent. As typical instances of this may be cited the dreadful ordeals the capital, Guatemala City, has suffered because of its central position in this eruptive zone.

Don Pedro Alvarado and a hundred or so of his Spanish *conquistadores* established the first Spanish city provisionally in the little town of Iximché, in the Valley of Almolonga, July 25, 1524, and because the day chanced to be the festival of St. James, called their city Santiago de Guatemala. Three years later, however, in 1527, the foundation was moved eastward to the foot of the Water Volcano (*Volcán de Agua*), so-called by the invaders because its spacious extinct crater was filled by a lake. The natives called the mountain Humaxhpiu,\* or Flower Mountain, because of the luxurious and picturesque vegetation which flourished on the banks of the crater lake. The Spaniards experienced various earthquakes of more or less severity in their first few years of occupation, according to Bernal Díaz del Castillo and other chroniclers. But nothing overwhelming occurred until September of 1541. At that time a more than

\* Pronounced Hoo-mash-pew.

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usually severe shock cracked the sides of the crater, and the lake within, rushing tumultuously out, swept irresistibly down the sides of the Water Mountain and wiped out the foredoomed city at its foot. More than seven hundred Spaniards perished in the catastrophe, among them Alvarado's widow, Doña Beatriz de la Cueva, and his daughter, Doña Ana. Doña Beatriz succeeded her husband in the government of the city when he was killed fighting against the Indians in Mexico. She came of distinguished lineage, as her father was Admiral Diego de la Cueva, and her uncle the Duke of Albuquerque. As a curious detail worth noting, we may cite the ironic comment of contemporaneous writers who, even before this final blow, said of the evil luck of the city that "it had killed more than had perished during the ten years of the conquest."

MALE AND FEMALE MAYA TYPES OF THE PRESENT  
IN GUATEMALA. THE MAN LIVES AT S. MARTIN  
CHILE VERDE, THE WOMAN AT TOTONIAPAN.

The drowned capital, always after that referred to as the Old City, was never rebuilt *in situ*. Instead, in 1543 a new capital was begun in the nearby valley of Panchoy. King Philip II distinguished it with the title of the "Very Noble and Very Loyal City of St. James of the Knights" [*Muy noble y muy leal Ciudad de Santiago de los Caballeros*]. Shortly before this Charles V had conceded it a coat of arms upon which appeared the likeness of St. James mounted upon a spirited charger, with three volcanoes below, one of which was represented in eruption.

In 1565 and again ten years later, in 1575, earthquakes accompanied by tempests and inundations destroyed practically half the population. The Volcano of Fire, which the Indians



THE VOLCANO OF SANTA MARIA IN ERUPTION, THROWING OUT LAVA TOWARD THE TOWN OF CHUIPACHE.

called *Kakxamul*,\* or Fire-Spewer, was in active eruption for three weeks during December and January of 1580 and 1581, throwing out an enormous lava flow and vast quantities of ashes which destroyed the harvests. In 1585 the destruction produced by more earth tremors was so severe that for several years afterwards it was doubted that the city would be reconstructed. The shocks continued almost without cessation until 1773, when Santiago de los Caballeros, as capital of Guatemala and the city of second importance on the entire continent, was definitely destroyed, with heavy loss of life.

This final convulsion was the cause of a second removal. The new capital was laid out in the Hermitage Valley, where it still stands, and ever since the destroyed city has been called "The Ancient." But Guatemala City's terrible experiences were not yet over.

\* Pronounced Kakh-sha-mool.

The memory of the earthquakes of 1918 is still fresh in every mind. These most recent shocks were among the most severe Guatemala has ever experienced. The city was almost totally flattened out, and the casualties were appalling. But in these latter years the heroic population—what was left of it—have laboriously reared their city stone by stone from its debris with unequalled courage and optimism. However unsuitable a location for a city, this region is an ideal place for the labors of some scientific institution devoted to the study of geodynamic action, since here modern methods would be able to determine exactly which are the seismic, semi-seismic and non-seismic zones, and do it more conclusively than the Maya and their forbears, who had fewer resources and less skill. Moreover, modern studies of this nature could be made to include a consideration of and suggestions for

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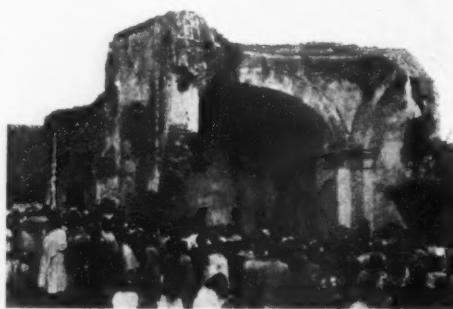


THE "BIRD-CAGE" CONSTRUCTION OF "WOVEN" WOODEN STRIPS, WITH CLAY OR ADOBE FILLING PARTLY FLAKED AWAY BY EARTH-SHOCKS.

the construction of edifices out of the local building materials, which would be virtually earthquake-proof.

A very small proportion of people of means have already built with reinforced concrete and the poor have created a style called "bird-cage construction". This latter consists of walls made like a woven fabric of strips of wood, or even of simple rods, whose generous interstices are filled with mud. On drying, this form of construction makes a relatively solid and compact block. Numerous earthquakes, however, have demonstrated that even this form of construction is not shock-proof, since the dried mud is shaken out in considerable fragments. In the majority of cases in both towns and cities, the construction consists of square blocks of stone and rubble. Every such edifice is, of course, inevitably condemned to destruction in future earthquakes.

Architecture which, in various



RUINS OF THE PALACE OF DOÑA BEATRÍZ DE LA CUEVA, WIDOW OF THE CONQUEROR ALVARADO, AND NIECE OF THE DUKE OF ALBUQUERQUE.

epochs and places, has been beautified with the local adaptations of the renaissance, plateresque, churrigueresque and baroque, could not here follow a normal evolution, and none of the styles mentioned persisted or developed. It is worth noting that in numerous colonial edifices and even in some erected at a later period, one curious and interesting feature occurs. This is the presence of a "corner column" in buildings facing upon two streets. Instead of presenting an acute angle at the corner, the apex has been truncated, and a column substituted for the normal construction, a detail analogous to that which may be seen in many Maya buildings, which disclose sometimes one, sometimes several columns at the corners. If the artistic inheritance of this people could not continue to develop and express



NATIVE HUT ON WHICH "CINCHES" OR WOODEN BINDING STRIPS ARE EMPLOYED TO HOLD THE ADOBE BLOCKS IN PLACE DURING THE WEAVING MOTION GIVEN THE BUILDING BY EARTHQUAKES. NEITHER THIS NOR THE "BIRD-CAGE" CONSTRUCTION HAS SOLVED THE PROBLEM FOR THE FEARFUL NATIVE.

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OLD GUATEMALA: ONE OF THE CURIOUS CORNER COLUMNS.

itself because of the pressure of the superior forces already cited, sculpture, on the other hand, principally in its religious manifestations, flourished so brilliantly there can be no disputing its supremacy on this Continent. Unfor-



A PHYSICAL RELIEF MAP OF GUATEMALA. EACH BLACK DOT IS A VOLCANO, EITHER ACTIVE NOW OR A POTENTIAL MENACE.

tunately, however, the exotic artistic tendencies which have developed throughout Latin America since the beginnings of the XIXth century, have brought about the decadence of this unique art.

Among the obstacles of a biological character which have interfered in Guatemala with the life development of its population and the consequent making of progress toward utilization of natural resources on both the coasts and in the rich Petén region, have been those tropical scourges, malaria and yellow fever. This latter played havoc during the colonial period; its toll of life then, and probably during pre-Hispanic times, is uncounted. However, as it has been extirpated during



THE ORIGINAL CATHEDRAL OF GUATEMALA THE ANCIENT, ONE OF THE OLDEST CHURCHES IN AMERICA. IT WAS BEGUN IN 1534.



GUATEMALA THE ANCIENT, WITH THE PALACE OF THE CAPTAINS AND, IN THE BACKGROUND, THE MENACING VOLCÁN DE AGUA, OR WATER VOLCANO, WHICH DROWNED THE VENTURESOME CITY IN 1541.

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the past few years, we need refer only to malaria. According to opinions worthy of all respect, malaria, or, as it is aptly termed in Spanish, "marsh fever," did not exist in Guatemala—and probably nowhere else in the Americas—until it was imported by the white colonists. Notwithstanding this opinion, let us examine two arguments bearing upon the matter.

It is undeniable that the effects of malaria have been and are infinitely more severe, its results more disastrous, upon the white than upon the

endurance of this disease had given them a relative immunity at least; on the other hand, had malaria been an importation and therefore entirely new to the Indians' physiological powers of resistance, it is not unreasonable to assume that it might well have the same terrible percentage of mortality as the smallpox. For another thing,



THE CHURCH OF LA MERCED, IN OLD GUATEMALA. THIS TYPE OF COLONIAL SPANISH CHURCH ARCHITECTURE SHOWS IN EVERY LINE THE PURPOSE OF THE BUILDERS: TO DEFEAT EARTHQUAKES AND REAR A SAFE AND PERMANENT EDIFICE.

Indian. This latter has lived normally along the coasts and in the lowlands both before and after the conquest without appearing to show any evil effects from the disease, whereas the organism of the white is undermined speedily by malaria, and not infrequently destroyed. The Petén region affords an eloquent illustration of this. In greater or less proportion it has been populated by the indigenous tribes of Indians for more than two thousand years—but for four centuries the white has been unable to acclimate and establish himself in it. It would seem, accordingly, as if the natives' age-old



OLD GUATEMALA: SIDE PORTAL TO THE LITTLE SQUARE OF SAN FRANCISCO.

the colonial chroniclers, beginning with Cortés and Bernal Díaz del Castillo, make no reference to having brought such a scourge with them. They do specifically mention bringing the smallpox. They also refer to the fevers with which they suffered in traversing marshy or swampy regions—fevers they knew nothing of in the Mexican highlands. As an hypothesis subject to modification or withdrawal, we may

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believe that the Historic Maya civilization did not establish itself permanently in the Petén, notwithstanding its freedom from seismic disturbances, because the biological factor, in this case constituted by malaria, prevented. On the other hand, this remarkable culture expanded in Yucatan, where it flourished steadily and reached eventually its most brilliant stage of development. This seems due to the fact that there are no ponds or swampy regions there, with a consequent absence of malaria—with the exception of most unusual instances, as at Uxmal—and the water filters itself in traversing the spongy calcareous soil on its way to the underground reservoirs provided by Nature. It is also well known that during the Spanish domination, malaria and the ardent, humid climate prevented the expanding colonial population from reaching up into the Petén, whereas in Yucatan the population grew steadily because neither of these factors impeded a normal increase.

As we have already seen, human life in Guatemala was powerfully affected by geographic and biological elements. In due course Man, inspired to

economic progress and influenced considerably in this regard by the general aspect and arable character of his new territory, may be said to have found his mastery dividing itself into four distinct epochs. The first of these was marked by his introduction and acclimatizing of herds of cattle, and of wheat. The waving fields of this grain, and above all, the sweeping expanse of pasture lands, replaced the indigenous vegetation throughout vast stretches, radically altering their aspect. At the commencement of this period, the necessities of life were exceedingly dear—hogs brought no less than twenty *pesos* and eggs twelve *centavos*. By the end of the sixteenth century, however, supplies of all sorts were so ample that excellent beef sold three or four pounds for a *centavo*. A century and a half later, according to figures given by

Remesal, and transcribed by Don Antonio Batres Jáuregui in his interesting work *La América Central Ante la Historia (Prehistoric Central America)*, herds of thirty to forty thousand beef cattle changed hands at four *pesos* a head.

When, in turn, coloring matter de-



DON PEDRO DE ALVARADO Y MESIA, KNIGHT OF THE ORDER OF ST. JAMES, ADMIRAL OF THE SOUTHERN SEAS, PIONEER, FOUNDER AND FIRST CITIZEN OF GUATEMALA.

(Painted in 1854 by Doña Delfina Luna, and paid for by the City Corporation with a gold medal.)



DR. GAMIO (CENTRE) WITH THE MAYOR AND ALDERMEN OF THE TOWN OF SAN MARTÍN CHILE VERDE (ST. MARTIN-GREENPEPPER).

rived from cochineal and indigo began to assume importance as an article of export, the second epoch began. Vast reaches of hitherto fertile, cultivated territory began to assume a desert aspect due to the planting of the cacti needed for the propagation and sustenance of the cochineal insect.

The appearance in the world's markets of aniline dyes quickly dislodged the cactus and its attendant insects as well as the indigo plant, and the third economic period opened with the coming of coffee cultivation. From that time to the present, coffee has been the principal export of Guatemala. This beautiful, exotic shrub has imposed a special botanical selection in extensive tropical and semi-tropical regions, since its proper development requires the absolute exclusion of other shrubs and small plants, while at the same time shade must be provided by

specially selected trees which have neither too much nor too little foliage.

The fourth, and most promising period of all, has been but recently inaugurated by the introduction of hydro-electric power. The resources of Guatemala in this respect are enormous and the potentialities of development incalculable. In a future apparently very close at hand, this energy will be utilized in the electrification and mechanical transformation of local materials, and the mighty hand of industry will transform the face of the soil once more, as ages ago it was changed by the planting hand of man who set out his wheat, grazing-lands, cactus, indigo, coffee, sugar cane, etc.

Thus far we have considered only those natural obstacles over which man stumbled during his progress in Guatemala. But now reference must be made to the difficulties he made for himself



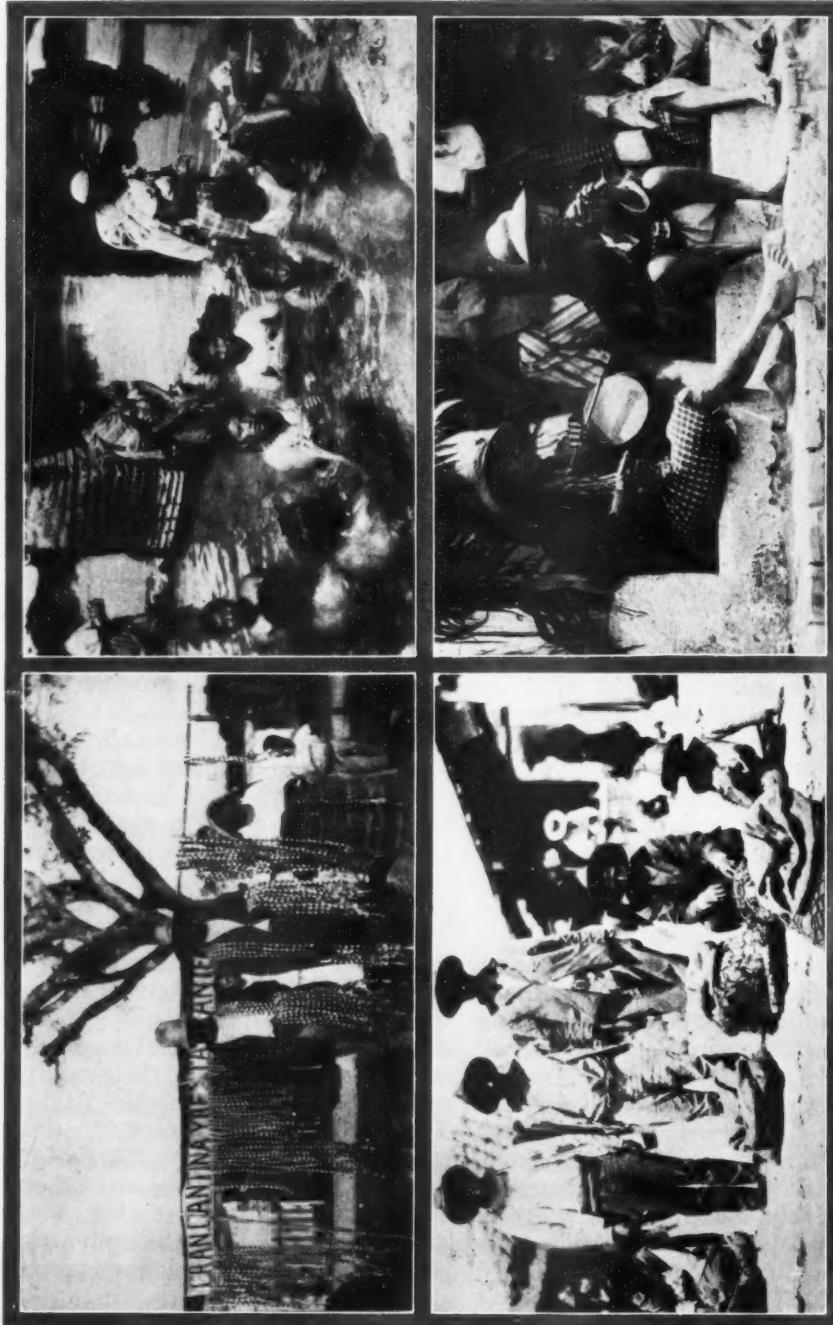
HUMAN REMAINS DISCOVERED BY DR. GAMIO UNDER THE PEDREGAL, OR LAVA BEDS OF SAN ANGEL, MEXICO CITY, DATING FROM THE ARCHAIC PERIOD.

and placed in his own path: that is, the burdens of an historical and socio-logical nature brought along by the various migratory currents, and the consequent racial, cultural and linguistic contacts effectuated from very remote times to our own.

The true founders of the Guatemalan people were the Archaics who came into the country some four or five thousand years ago. This estimate of time is held by conservative archaeologists and geologists to be true as regards the formation of the currents of lava in the Valley of Mexico which overflowed the most important Archaic centre yet discovered. The cultural vestiges thus far recovered from beneath the lava of the Pedregal appear to be relatively contemporaneous with the remains of the first Archaics who came into Guatemala, and we may

therefore assume an approximate similarity of date.

In the cultural and even the physical sense, the Neo-Archaics were a direct continuation of the Classic Archaics. In the Primitive Maya period a mingling of blood and culture was effected for the first time between the Guatemalan Neo-Archaics and the Neo-Toltecs who came down from Mexico. The latter probably presented physical and idiomatic characteristics similar to those of the present day Otomí of Mexico, and their cultural aspect alone served to differentiate them morphologically from the Classic Archaics. The Archaic Toltecs were constituted by a mixture of the Neo-Archaic elements of Mexico—analogous to those of Guatemala—and pre-Toltec strains which proceeded from the septentrional [northern] Mexican region and probably



PRESENT-DAY MAYA TYPES CLEARLY INDICATING NATIVE TRIBAL CONTRASTS.

Upper Left: Rustic manufacturers of rosaries. Upper Right: Archaic bath tub crudely sculptured by Father Time.  
Lower Left: Street vendors in a country town. Lower Right: "Music hath charms—"

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spoke the Aztec language. It is quite possible also that they bore a certain physical resemblance to the Aztecs, and carried with them cultural innovations, chiefly in an architectural sense.\*

The fusion between these Guatemalan Neo-Archaics and the Archaic Toltec Mexican immigrants was so harmonious and efficient that it produced the Primitive Maya people, the ancestors of the Historic Mayas who, in turn, were the creators of the most grandiose native civilization in

unity the combining elements presented.

Since from conquest days to the present the situation of the native Indian has always been one of manifest misery, cultural retrogression, personal suffering and physiological degeneration, the formation of a sound *mestizo* or mixed-breed class has been exceedingly slow.

The members of this division of the population are, generally speaking, as poor in quality as they are relatively



A STURDY NATIVE OF SOLOLÁ SIPPING HIS *atole*, OR CORN GRUEL.

America. In the XIIth century a second wave of immigration flowed down, this time of Toltec-Aztec character. It also exercised a beneficial effect, as may be observed in the city of Chichen Itzá, which is a typical objective example of this fusion. The happy results of all these unions is due probably to the intimate relationship they established from that point onward between the various human groups, as well as to the fundamental cultural

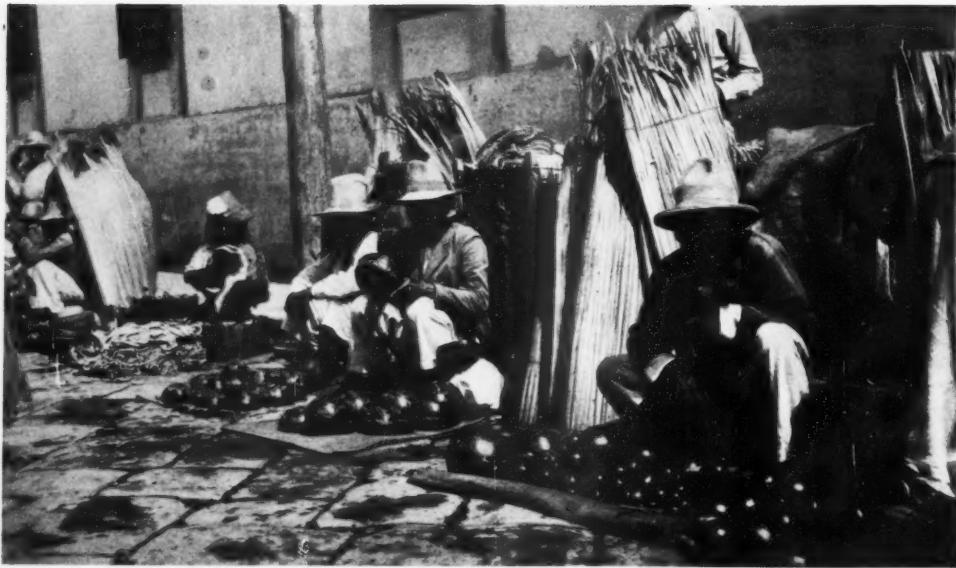
\* The analogies between the Aztecs and the Archaic Toltecs, to which reference is made above, are based upon the fact that in stratigraphic excavations in the Valley of Teotihuacán, Mexico, Aztec ceramics appeared, though in very small proportions, in the lowest, or most ancient, strata.



VILLAGE BELLES OF GUATEMALA.

few in numbers. This explains why today, as was the case four centuries ago, the pure natives constitute the overwhelming majority, with the whites far inferior to all the others numerically. This ethnic heterogeneity connotes conditions of divergence and even of antagonism which are clearly most unfavorable to the development of a sound national life.

As for cultural contacts and traditions, ethical, aesthetic and religious beliefs, habits and customs, institutions, etc., no satisfactory merging was effected. The indigenous type of culture persisted in the social majority of this ethnic affiliation, although with a marked tendency toward degeneration



QUICHÉ POTTERS OF RABINAL, NOTED AS MAKERS AND SCULPTORS OF THE CHASED AND DECORATED CHOCOLATE-POTS SEEN AT THEIR FEET. NOTICE THE FABRICATED PALM-LEAF MATS TO KEEP THE POTTERY DRY WHEN IT RAINS.

and disintegration. The Hispanic culture naturally continued to dominate the white newcomers. From the attrition between the two developed a new, mixed culture. But with the exception of a very few chroniclers, religious and governing officials who conceded some slight importance to the native culture, the Spanish colonizers in general disdained it and confined their interest to destroying one or another of its fundamental manifestations, as for example its mythology and architecture. Accordingly, the great native majority continued—as, indeed, it does today—living in its own little huts, using implements and domestic utensils of prehispanic type, and subsisting fundamentally as it did before the conquest, upon a basis of maize, beans, peppers and their derivatives.

Any traveler may observe all this for himself. He may even examine closely

in the markets throughout Guatemala vases, jars and chocolate sets with the identical technique and decorations of long vanished epochs. The same statement applies also to textiles, with anthropomorphic and zoomorphic decorations of distinctly precolumbian character. He may also visit, as the writer personally did at San Martín Chile Verde (St. Martin-Greenpepper) and other places, the entrances of caves and the high places on mountain and hilltops, in and on which the natives still worship according to the ancient cults. Upon many a famous altar are still laid ritual objects the same as or analogous to those employed in the most formal ceremonies of ancient days—the plumes of sacrificed birds, animals modeled in clay and set forth upon a cedar table, a great chair like a throne, probably meant for the presiding officer, copal resin, vases of modern type in clay and

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A STREET CONCERT IN SOLOLÁ, GUATEMALA, BY THE MARIMBA TRIO.

others which appear to be archaeological specimens, and the like.

As evidences of the fear engendered among these simple folk in earlier times by the Catholic Church and the Inquisition, there are crosses of various sizes adorned with flowers and spattered with some unidentified substance. Considered as a whole, archaeology—in Guatemala as in all the other Indo-Hispanic countries—cannot be rated as a static or passive branch of speculative knowledge. It is rather much more of a sturdy guide by whose aid we can arrive at an understanding of the true characteristics of the "archaeological Indian of today", of the motivating forces behind his cultural decadence, and of the practical means to be taken if we are to transform whatever there is of use and beauty in his mummified civilization into the forces of modern, progressive culture.

The culture already described as Spanish concerns only the whites in Guatemala and a small proportion of the *mestizos*. It is unnecessary to go into descriptive details, since it presents in the main the well-known features common to all white cul-

ture throughout Latin America, though adapted to special local conditions and circumstances. It displays, however, certain persistent survivals of very ancient Spanish origin. For example, the idiom of the most cultured families is very similar in its constructions to that of the XVIth century. Religious ceremonies throughout the country clearly bear the stamp of past centuries. This is particularly true of the Holy Week services, which seem to duplicate the classic observances which have always characterized the festival in Sevilla.

The mixed culture covers a great majority of the *mestizo* group and a small number of the whites and Indians. It is formed by convergent derivations from both Hispanic and indigenous civilization, examples of the contacts of this type being in general somewhat as follows: The Guatemalans' interpretation of the outer world, and of the immediate part of it which affects their own lives, is absolutely traditional and empiric. It resulted from an unbalanced mingling of the respective ideas of Castilian and Indian. Native myths and Catholicism have been jumbled together to produce a Catholicism which corresponds with neither the doctrines of Rome nor the precepts laid down by the great Indian priests of the past. The so-called popular art, costume, textile fabrics, furniture, hardware, domestic utensils, etc., were also fully responsive to this confusion of forms. Spanish agriculture brought with it wheat, cattle, coffee, sugar,

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poultry, and the like. The indigenous provided in its turn maize, cacao, tomatoes, the domestic turkey or *xompipe*,\* as the bird is known in Guatemala, thus forming a new, mixed alimentary schedule in which there alternate vaguely the flesh of poultry and beeves, peppers, wheat-bread and corn cakes (*tortillas*), coffee, milk, corn-gruel (*atole de maíz*), chocolate, etc. The Indian, however, persists in the nearly exclusive use of his ancient vegetarian cuisine, based upon corn, peppers, beans and their derivatives, while the white prefers his wheat and its products, beef, milk, etc.

Finally, there must be noted the place and tribal names and the multiplicity of native idioms spoken by probably more than a million people.

Before the conquest a third migration occurred, of Aztec origin; but it had little or no influence upon the cultural aspects of Neo-Archaics and Primitive Maya civilization, since no Aztec types can be traced in architecture or ceramics in either Guatemala or in museum collections. Nevertheless, it seems that Aztecs from the Mexican region of Cholula, already influenced by the Toltec culture, invaded other parts of Central America, notably Nicaragua and Costa Rica, as can be easily shown by the striking similarity which exists between the picturesque polychrome pottery of these regions and that of the former.

The last migratory current to wash up in Guatemala was of Spanish origin, and

carried with it the conquest of the aborigines. The contacts which from that time onward were effected between conquerors and conquered produced results entirely distinct from those caused by previous immigrations. New gods, new men, a new idiom, new customs, aspirations and necessities quickly arose, giving origin to various ethnic and cultural groups. In the ethnological sense the people were divided into three classes: Indians, whites and half-breeds. The divergence thus sharply defined by race, color, habits of thought and speech, presented difficulties, as is the case in practically all Indo-Hispanic countries of America, which in many cases amounted to positive antagonism. Although there is no regular census in Guatemala, nor any accurate means for counting those of identical linguistic, ethnic and cultural traits, a fair approximation of the population may be considered as more than a million natives of pure original stock, more than five hundred thousand *mestizos* or half-breeds, and somewhat more than a quarter of a million whites,



THE ARRIVAL OF THE WASHINGTON SOCIETY'S EXPEDITION INTERESTS THE ENTIRE TOWN OF SOLOLÁ.

\* Pronounced shom-pee-pay.

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MAYA PEDDLERS OF POTTERY, BASKETS, ETC., TRAMPING IN FROM THEIR COUNTRY HOMES TO SELL ON THE STREETS OF SAN CRISTOBAL, A MOUNTAIN TOWN IN QUETZALTENGO, GUATEMALA.

making a total of some two million souls. Unfortunately in recent years this ethnic heterogeneity has been on the increase, aggravated to no small degree by the new negro element imported from hot climates for work upon the banana and other plantations.

The first results of the conquest, once the invading Spaniard was at home in the saddle, were economic. They consisted in dispossessing the native Indian of his property—mostly agricultural—in requisitioning his labor, and in exacting from him tributes and contributions on all possible occasions and excuses. The white Spaniard held no repulsion for the brown Indian native, and the conquerors themselves married Indian women who were of noble descent and possessed wealth. When the Indian, however, had been virtually destroyed in the economic sense, genuine marriages practically ceased and their place was taken by natural unions, generally of a passing or tem-

porary nature. It is obvious that there was no inducement for the new masters of the country to bind themselves legally to women of a class both socially and economically inferior, especially since Spanish women were beginning to appear. This linguistic dissimilarity not only prevents free mutual com-

prehension by whites and Indians, but maintains an artificial barrier about each member of the diverse aggregation of native tribes—Maya, Quiché, Lacandón, Chuj, Mame, Jacalteca, Ixil, Chol, Kekchí, Pokonchí, Cakchiquel, Aguacateca, Uspanteca, Pokomán, Chorti, Xinca, Zutuhil and Pipil.

Granted the existence during four centuries of these large social groups which differ each from the other in physical aspect, cultural nature, idiom and economic condition, it is obvious that they could not develop along



NATIVE DANCERS DRESSED AS SPANISH CONQUERORS FOR THE DANCE OF THE "MOORS AND CHRISTIANS" HELD ANNUALLY AT SAN CRISTOBAL, DEPARTMENT OF QUETZALTENGO, GUATEMALA.

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MAYA TYPES FROM JAYABAZ, IN THE DEPARTMENT OF QUICHÉ: TWO WOMEN AND TWO MEN.

normal and harmonious lines because of their inherently distinct and unmodified aspirations, tendencies and necessities. Various interesting projects have been set afoot from time to time among the three main groups, chiefly with the idea of elevating the condition of the native. Such, for example, was the school for Indians planned by President Barrios. Unfortunately, it died a-borning. Other schemes, some of them so fantastic as to produce nothing more substantial than jocose commentary, aimed at the "civilizing" of the native. Among these chimerical propositions was one, laid before the Guatemalan Congress while the writer was in the country, to prevent the Indian from entering the capital carrying his poor little stock-in-trade on his shoulders. One deputy solemnly seconded the petition, but added that since to obey the new law would lay the native liable to penalty or mire him still deeper in misery, every Indian affected by the bill should be provided automatically



NATIVE ALTAR AT THE ENTRANCE OF A CAVE AT SAN MARTÍN CHILE VERDE, WHERE CEREMONIES ARE STILL HELD BY THE TRIBAL SORCERER-PRIESTS. THE SUPERFICIAL INFLUENCE OF CHRISTIANITY IS SHOWN UPON THESE PAGAN RITES BY THE CROSSES.

with a motorcycle to carry his produce!

To sum up, we may believe that only when the proper means are found to stop the loss of life and property occasioned by the frequent terrestrial movements, will normal evolution and a period of genuine well-being for the people of Guatemala be possible. With the coming of such a period the potentially rich tropical regions, now almost totally non-productive, can be safely and widely exploited, thanks to the extinction of malaria. Finally, when scientific investigation has enabled us to comprehend the true characteristics of the mass of the "archaeological natives", it will be possible to fill their most crying needs and to advance in an effective manner their collaboration in the national life, since these indigenous masses are the magic wand able when properly used to transform the immeasurable but now practically inert natural resources of the country into palpitant and revivifying wealth.



FIVE DEGREES OF SHYNESS.

# ACTIVITY IN PROPORTION TO PHYSICAL EQUIPMENT

## COMMENT UPON DR. GAMIO'S REPORT

By ALFRED M. TOZZER

*Division of Anthropology, Harvard University*

ONE of the most important *lacunæ* existing in our knowledge of the Maya civilization, the contact between the earliest remains in Central America, called Archaic, and the Maya, has been in part filled by the important work of Dr. Gamio. His interpretation of the relationship of cultures is not the one generally accepted by other workers in this field. He places the Toltec peoples as an offshoot of the Archaic and the sponsors of the Maya civilization. Others seek to prove that the Archaic was closely connected with the Maya which, in turn, shed its influence upon the Toltecs who later were themselves to influence the Mayas in the last period of their history.

Turning, however, to broader fields, one may truthfully say that all the axioms of meteorology and of climatology are "not self-evident truths" but clearly demonstrable untruths when we consider the great civilizations of Mexico and Central America. A climate "unsuitable" for the development of great populations did manage to produce several of the greatest centers of aboriginal life in the New World. Cities, two and more square miles in extent, with civic centers and plazas lined with great pyramidal structures of stone, all show the expenditure of the greatest amount of physical energy.

The social, intellectual, religious, and artistic activities were in proportion to the physical equipment of these Central American peoples. One authority

would have us believe that the climate must have been different when these civilizations were in their prime, and he would bring in a change of climate to account for their downfall. This theory is not generally accepted.

A remarkable freedom from diseases which now make the tropics adverse to the development of great civilizations, seems formerly to have characterized the area occupied by the Maya peoples. There appears to be no unsurmountable difficulty in the way of freeing this fertile region from these unwelcome characteristics. The Canal Zone has been made habitable to all peoples; yellow fever has generally been eliminated; malaria is the next scourge which should be attacked by those far-seeing and courageous missionaries of good health and progress.

The social aspect is another problem. The native population, their Spanish conquerors, and the influx of other peoples make a complex difficult to adjust. There are all grades of culture now present within the confines of Central America, from those natives living in the midst of the bush who have remained severely apart from all Spanish influences, and still carrying on the remnants of their pre-Columbian faith, through those Indians with varying degrees of the veneer of Catholicism, those of different mixtures of Spanish and Indian blood, to pure whites mainly of Spanish origin. The country is not free from the human

*(Concluded on page 44)*



THE FOUNTAIN OF THE BULLFROGS AT THE ENTRANCE TO CHAPULTEPEC PARK, MEXICO CITY.

## OLD WORLD MEETS OLD WORLD IN MEXICO CITY

By EARLE K. JAMES

MEXICO City last year celebrated its six-hundredth birthday, and thus can lay claim to being the oldest capital on this continent. Historians and scientists are agreed that 1325 represents very closely the date when the Aztec city of Tenochtitlán was founded by a tribe that had wandered south from northern latitudes; but in the story of a people seeking the promised land like the Israelites of old, and discovering it following the finding of the sign—in this case a rock on which perched an eagle with a snake in its mouth, and which has become the national emblem—these chroniclers of the past see more legendary folklore of the Remus and Romulus type than historical facts.

Age is not the only distinction of the Mexican capital. The post-Hispanic section of the city is built on what was once a shallow lake, into the muddy bottom of which the Aztec city has sunk. Mexico City has, consequently,

not absorbed its predecessor but used it as a foundation, and the archaeological wealth beneath the surface is the despair of the scientist. Here and there an age-old monument peeps through the pavement into a busy street, but modern economic and social systems make the latter more valuable than the former, and the treasures and secrets of a mighty civilization must remain hidden. Inklings of its greatness have come up in fragments uncovered by the pick of the builder and saved by some passing scholar before the sledge-hammer shattered them into ballast, as was almost the fate of the famous so-called Sacrificial [really Votive] Stone of Tizoc.

What Mexico has inherited from the Aztecs and made into one of the most beautiful of parks is Chapultepec Forest, to the southwest of the city. It surrounds a small hill and, being originally on the edge of Texcoco lake, has been preserved from the absorbent

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characteristics of the latter's muddy bottom. Today the hill is crowned by the presidential residence, a building of colonial times given the pretentious title of *castillo* but entirely unlike the structures that the term "castle" conjures up in the imagination of one acquainted with the mediaeval edifices of Europe. Below is the great forest of giant *ahuehuetes*, trees that scientists

hopper hill"—during the Aztec dominion held on its crest a fortress, used at first to ward off attacks of lacustrine tribes but later, when Aztec sway was undisputed, as a temple and, some say, a burial place for Aztec monarchs. Montezuma II made of it a summer residence; Maximilian, a Mexican Miramar of Tuscan style and Pompeian voluptuousness, worthy companion to



ARTISTS WALK IN THE FOREST OF CHAPULTEPEC, MEXICO CITY.

tell us were old in Montezuma's time, the largest one, known as Montezuma's Tree, being 45 feet in circumference and 200 feet high. These in their pristine beauty constitute the greater part of the park, though added to their rugged grandeur are the modern flower-beds, rivaling those of Princess Gardens that lie below Edinburgh Castle.

Chapultepec—the name is derived from two Aztec words meaning "grass-

his Adriatic home. From the Orient came another exotic touch in the form of a room donated by her Majesty the Empress of the Celestial Kingdom. Archduchess Charlotte had built a special bath of lustre tiles. A hole in the forest where a spring bubbles up is known as Montezuma's bath.

The earth here has yielded a few archaeological remains, such as the porphyritic basalt statue of Huitzilo-

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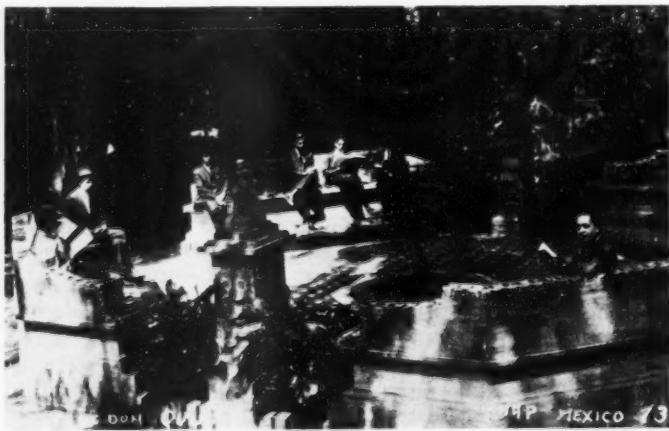


CHAPULTEPEC CASTLE ON THE BROW OF THE HILL ABOVE THE MONUMENTAL FOUNTAIN, MEXICO CITY.

pochtli, God of War, fearful monster, patron deity of the Aztecs of Anáhuac, whose altars reeked with the blood of thousands of victims. The sod that held this unnatural parthenogenetic deity in its bosom has drunk the blood of others that were not Aztecs, Toltecs or Tepanecs—Spanish blood in the time of Cortés, and American blood later when the "Yankees" stormed the hill and brought glorious death and immortal fame to the Mexican cadets who struggled to defend the soil of their ancestors. But the forest is now a majestic cathedral of infinite peace and quiet, where lofty trees shut out the jangling racket of the world, and raise the soul to heavenly reaches. And, as if to encourage rest and meditation we find there

the Fountain of Quixote, an artistic creation of lustred tiles that rests at the intersection of Philosophers' and Artists' Walks. It is in strange yet charming contrast to the antiquity of the forest and its associations, glistening in the slants of sunlight that pierce the heavy foliage and hanging festoons of grey moss, its trickling water breaking a silence that seems to have endured since Aztecs ceased to tread that sod.

Four tiled seats embrace the octagonal-shaped fountain and carry a series of 180 majolica tiles depicting scenes from the famous masterpiece of Cervantes, including portraits of the author, of Don Quixote himself, of his fair lady Dulcinea, and of his trusty steed Rocinante. In the center is a slender pedestal supporting a graceful basin from which drips the water, the pedestal and basin being also of majolica. The floor is of monochrome red tiles with smaller ones of green and blue interspersed. It has two inscriptions, one the famous first line of the book: "*En un lugar de la Mancha de cuyo nombre no quiero acordarme,*" etc. The other is a message from the City of



ALL ARE FREE TO DRAW BOOKS FROM BENEATH THE FIGURES OF THE KNIGHT OF THE SORROWFUL COUNTENANCE, AND READ HERE TO THE SOFT MUSIC OF THE WATER BENEATH NOBLE TREES.

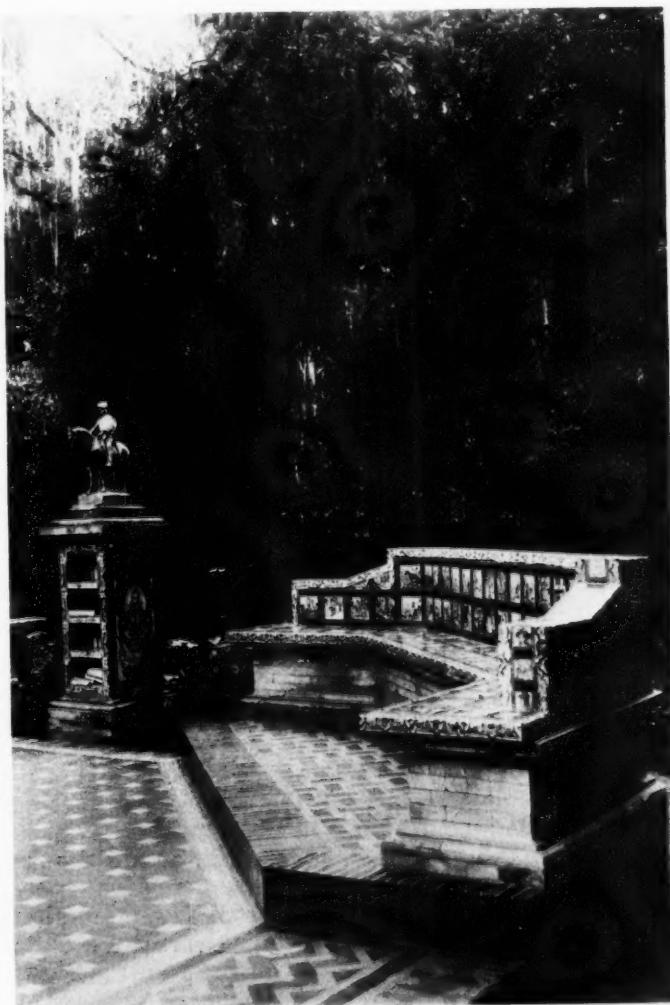
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Seville (where the original of this fountain stands) to the City of Mexico, in which the former prides herself on the part she played in the conception of the masterpiece, and expresses the hope that the fountain may be "a monument erected in two worlds for the enlightenment of all men."

Between the two seats on one side is

a small statue of Don Quixote astride his beloved Rocinante, gazing sorrowfully at the gurgling stream of water. On the other side rides Sancho Panza, gazing upward, presumably at his master, were the statues side by side as the originals went through life, but here gazing at one of the giant trees as if in awe of this exotic setting.

In these statues we find one of the remarkable features of the fountain, for their bases are not ordinary blocks of stone but small tiled bookshelves where repose copies of Don Quixote. Cervantes's spirit has evoked, moreover, the spirits of other masters, for the works of Rousseau, Plutarch, Homer, Machiavelli, Goethe, Dante, Plato and Stendhal, the Scriptures, histories of Mexico, and an encyclopaedia are also to be found there. Every day humble Indians and sophisticated students leave their labors and pause in the solitude of that primeval forest to refresh their souls at a veritable fountain of knowledge. Truly would Cervantes have been surprised had he been told as he sat in Seville preparing his immortal work that some day, in a land far across the seas just conquered by Cortés, and in a forest in-



ONE OF THE READING BENCHES, BESIDE THE OPEN BOOK-CASES AND STATUE OF  
DON QUIXOTE ON HIS IMMORTAL CHARGER ROCINANTE.



Copyright, Hugo Brehme, Mexico.

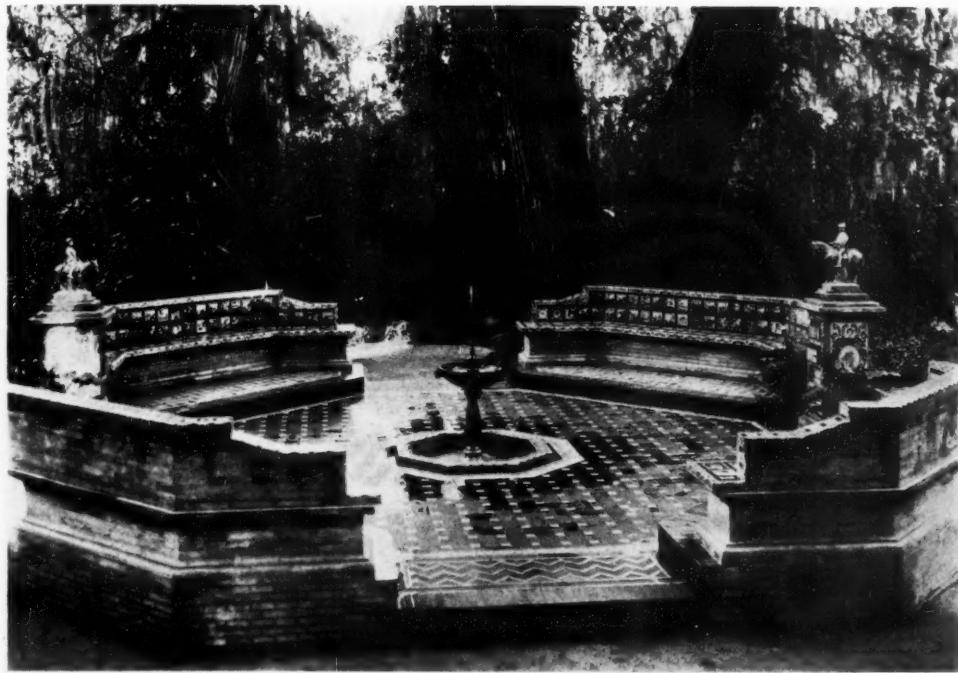
MONTEZUMA'S TREE IN CHAPULTEPEC FOREST, ONE OF THE GIANT AHUEHUETES OR CYPRESSES WHICH GIVE THE FOREST ITS NOBLE ASPECT.

habited by what he would have called savages, he was to serve as inspiration to the descendants of a mighty race, as he provided inspiration to the youthful Heine in the royal gardens of Düsseldorf. Here the culture of the old world meets the culture of what we call the new.

The practice of reading to the sound of dripping water was popular with the Moors, and fountains are always prominent features of the buildings they left in Spain: witness the *Patio de los Leones* of the Alhambra as an example. The Fountain of Quixote is a replica of one in the Maria Luisa Park of Seville, copied and transplanted to Mexico following the suggestion and efforts of Señor Miguel Alessio Robles, former

Mexican Ambassador to Spain. Sr. Alessio Robles also brought from the same park in Seville a replica of the Fountain of the Bullfrogs, which we find at the entrance to Chapultepec Forest. It is a circular basin of sparkling tiles, with eight green and yellow bullfrogs squatting on the rim, spouting eight graceful streams of water that meet in the center over a ninth stream projected from the beak of a white swan on the back of a brown turtle.

These two fountains are in true Talavera colors—blues, yellows, greens, and browns. The tiles were practically all made in Triana, the gypsy suburb of Seville famous for the industry brought there by the Moors nine centuries ago. Parts, however, were finished with



THE FOUNTAIN OF DON QUIXOTE IN CHAPULTEPEC FOREST, MEXICO CITY.

titles made in Puebla, the Mexican city whose tin-enamed ware is rivaling that of the Mother country.

Another fountain of interest but of very different nature to be found in Chapultepec is the one known as the Monumental Fountain, made of brown stone with decorations in churrigueresque style. The center portion of the fountain dates back to 1571, and marked one of the termini of the Aztec aqueduct rebuilt by the Spaniards and used to supply water to the city. The artistic and historic merits of the fountain were long unappreciated. A few years ago it was moved from its original position, restored, and now flanks the entrance to the Forest. Two extensions, decorated with panels of Puebla tiles, were added on each side to take the place of the symmetrical

background provided by the ancient aqueduct. While architectonically it is not indigenous, yet because of its age and associations it possesses a certain autochthonous flavor that contrasts vividly with the castle behind it and the trolleys and Fords that rattle by in front of it.

So to wander out of the hot sunlight into the shades of Chapultepec Forest, and to rest on the tiled seats of the Quixote Fountain is like merging one's spirit in the Gothic heights of Westminster Abbey—but Chapultepec holds the material and spiritual, the mortal and immortal, not of one civilization but of many—Aztec, Toltec, Hispanic, Roman, Gallic, and American. Here blood has mixed in conflict and cultures mingled in greatness.

## NOTES AND COMMENTS

A competition for prizes amounting to five thousand dollars to be awarded for the best designs for living-room furniture is announced by the Art Alliance of America, whose headquarters are at 65 East 56th street, New York. The prizes are offered by S. Karpen Brothers, furniture manufacturers. No designs will be considered which are limited by period motives. On the other hand, the competition is not confined to strictly modernistic themes, and it is expected that the contestants will evolve a series of designs not merely suited to the American dwelling of

York, there is clear reflection of Duveneck's life in Munich at the height of his creative power, and the influences which surrounded him there. The certainty and freedom of an original genius are strongly suggested in these masterful works. The quality we so much enjoy in his painting is his directness. His freedom in handling the brush as a means of expression, his freshness and unworried calm gives these canvases a mighty appeal, with all the inciseness of powerful draughtsmanship, lack of any fumbling, and insistence upon character. Much might be said of Duveneck



*Courtesy of P. Jackson Higgs Galleries.*

"THE MUSIC MASTER" AND "A YOUNG GIRL," TWO OF THE PAINTINGS BY FRANK DUVENECK RECENTLY ON EXHIBITION OF THE GALLERY OF P. JACKSON HIGGS, IN NEW YORK.

the present, but well balanced and thoroughly rational, however much they may exhibit traditional influences.

The late Jules Mastbaum, of Philadelphia, collected some two hundred of Rodin's works. They were on exhibition recently during the ill-starred Sesquicentennial Exposition and shortly will have a home of their own. Left as a bequest to the city, they will be finally shown in a museum which will be similar in plan and design to the great sculptor's villa at Meudon. The building will also contain books, letters and paintings of Rodin, and those who wish to know the master will find the new museum a deep source of information concerning modern French art.

In the two portraits by Frank Duveneck reproduced on this page by courtesy of P. Jackson Higgs of New

that has been said of Ribera with regard to his textures, his simplicity and his straightforwardness, though of course the modern, working in a totally different atmosphere, was not tintured, as was the "Little Spaniard", with religious and ascetic gloom.

The long dismembered pulpit made by Giovanni Pisano for the Cathedral of Pisa, has at last been completely restored and unveiled. The *London Times*, in commenting upon the consistent undervaluation of this remarkable work, and its long obscuration, points out that Niccolà Pisano and his son Giovanni are now, centuries after death, artistically united in their work, the father in the Baptistry, the son in the Duomo. "For some 250 years," continues *The Times*, "the pulpit, as Giovanni made and left it, until about the middle of the last century had no existence even in the

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minds of men, when Professor Fontana, after a careful study of the scattered fragments, constructed a small wooden model of the whole which is still to be seen in the civic museum of Pisa." Construction was begun after the war, the appropriate site for the pulpit found in the Cathedral, and on May 25 last Premier Mussolini unveiled the structure, which provides a new joy for every visitor to the old city by the Arno.

A copyrighted dispatch to the *New York Times* from Cairo, Egypt, October 30, reports that the mummy of Tutankhamen has been replaced in its sarcophagus temporarily though it seems unlikely it will ever be removed. The replacement was effected in the presence of Government officials and scientists. The dispatch continues: "Mr. Carter's preliminary investigation, carried out since his return, of the hitherto unopened store room of Tutankhamen's tomb, which was expected to yield such wonderful treasures, has shown that although this chamber is full of most interesting funerary furniture of a religious character, it will not produce such valuable objects as those discovered in the burial chamber last season."

Plans are afoot for opening up the land entrance to the noted Blue Grotto on the island of Capri. The only entrance for centuries has been by water, and as anyone who has entered the Grotto in rough weather knows, it is very hazardous at such times. Many visitors in winter are compelled to leave the island without having seen the famous cavern. The Italian authorities are hoping that the "Stairs of Caesar" and the tunnel giving entrance to the cave from the hamlet of Anacapri, will soon be excavated. It is believed, also, that the work will disclose at least a part of the palace of Tiberius, whose life on the island has been so meticulously described by Suetonius.

During last summer's work by a party from the Ohio Museum on the mounds in that State, the skeleton of a boy about twelve years old was discovered, accompanied by his "marbles". The burial was one of a group in the Brier Mound, a short distance from Chillicothe, where the "pearl burial" was found earlier in the year. Curator Shetrone reported that he found some "marbles" made of "chlorite, a fine close-grained stone that takes a very high polish, engraved in beautiful designs . . . . We believe that the game of marbles was a time-honored pastime even in the days of the mound-builders . . . . 2,000 years ago."

Jacques Seligmann & Company opened their new galleries, at 3 East 51st street, New York, on November 30 in the presence of a distinguished gathering of connoisseurs. The formal address was delivered by Professor Charles R. Richards, former Director of the American Association of Museums. During his remarks he pointed out the value of the gallery as a sort of unofficial collector for the great museums, and remarked feelingly upon the influence the Seligmann and other similar institutions have in developing the public taste for and appreciation of art.

### SPECIAL MUSEUM NUMBER COMING

In February *ART AND ARCHAEOLOGY* will devote itself to a consideration of the need for and purpose of a truly National Gallery, illustrating this leading article with photographs of the principal museums in the United States, and several in Europe. The value of such a presentation of the world's foremost art museums in one issue of a magazine is too obvious to

need comment. Other features of this special number will be a brief paper by a Japanese connoisseur on some of Japan's museums and collections, "Max Bohm", by Rose V. S. Berry, the Parthenon of Nashville, illustrated by Professor J. K. Roberts, the Exhibition of Swedish Industrial Art at the Metropolitan Museum by Alma Olsen, and perhaps also "A Master of the Seicento", by Mr. David Heineman.

*El Universal*, of Mexico City, reports the discovery of another important buried city in the State of Chiapas. A second discovery, made by a government scientific party under Señor E. J. Palacios, was made near Juxtlahuaca, Guerrero. Señor Palacios reported the discovery, according to press dispatches, as follows: "Have discovered very notable ruins of a Maya city. There are abundant inscriptions, and precious edifices. It was totally unknown until the present." A third announcement concerns some astonishing caves on the ranch of Isaurio Silva, in which petrified human remains, skulls, cooking utensils, weapons, tools, etc., were found in quantity. Included in the caves, which appear to run in a series, are said to be 28 enormous white marble rooms or chambers in one section, and a considerable number of others in a different part. The newspaper declares these caves have long been known to the native Indians, and were used as his retreat by the bandit Antonio Hernández until his execution last year. The familiar myth of buried treasure may have more than the usual background of imagination in this instance; but it is regarded as very unlikely that any lost city will be brought to light. The State geologist declares the caverns to be natural formations only.

### A CORRECTION FOR DR. GAMIO'S SECOND ARTICLE.

A letter from Dr. Gamio, who is now in Mexico City, contains the following change he desires made in the text of Part II of his "Cultural Evolution of Guatemala," which appears in this issue. The correction was received too late to incorporate it in the body of the article, which had gone to press. Dr. Gamio asks that instead of the first paragraph on page 25 of this issue, the following be substituted:

[The third era was that of coffee and the banana. . . . fruits which constitute—above all the first—the country's sole export. Coffee has imposed a special botanic selection through extensive regions, since its development required the absolute exclusion of other shrubs and small plants, while at the same time demanding the shade of certain tall trees whose foliage must be neither too dense nor too light. The geographical conquest made by the banana is even more radical, since it demands the absolute destruction of the autochthonous vegetation. From the economic point of view coffee is a democratic shrub, because it can be and is cultivated by both rich and poor, great plantation owner and simple peasant. Bananas, on the contrary, are plutocrats, never yielding their sweets to the modest planter but only to enterprises conducted on a grand scale.]

The rest of the article required no changes.

A Danish archaeological expedition recently sent to South Greenland under the leadership of Professor Noerlund is reported in the press as having discovered at Ivigo the foundations of a considerable church which may have been the cathedral of the Norse bishops of Ivigo, who were established in the XIth century to care

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for the religious welfare of the colony planted by Eric the Red about the year 1000. The colony vanished in time, and the last bishop died about 1377. Dr. Noerlund has found not only the church foundations but remains of the building believed to have been the archiepiscopal palace, covering some five acres and constructed of red sandstone, the skeleton of a bishop still with his ring of office, a crozier of walrus horn [tusk?] and other articles. The skeleton is thought to be that of Bishop John Sverresfeste.

### ARCHAEOLOGICAL CONGRESSES HAVE A LIGHTER SIDE.

Mr. James T. Russell, formerly Assistant Secretary of the Archaeological Society of Washington, and recently a delegate to the International Congress of Archaeologists Meeting in the Near East, wrote home a long and interesting account of the proceedings of the Congress, describing in detail some of the highlights and disadvantages of being a delegate to such a convention. Extracts from the letter follow:

"On the very hot morning of March thirtieth we landed at an early hour in Haifa. The MacCurdys and I took a car and drove the seventy miles across range after range of hills, glorious in the flowers of the Judean spring, past the Well of Joseph, past Nazareth, past Samaria, up to Jerusalem. All the local color I had longed for in Constantinople was apparent at once in Haifa. Our driver wore a fez, we passed many camels, veiled women on donkey-back, Bedouin camps, and Bedouin men in long robes on fiery Arab horses. At about three in the afternoon, we reached Jerusalem. The MacCurdys went at once to the American School of Oriental Research, where they were put up, and I was conducted to the French School of Archaeology, a Dominican Monastery, where I was allotted a cell. I was thankful to find that I could eat at the school, for the Monks were having dried peas, bread, and water, it being Holy Week.

"I am afraid that on the whole I did not like Jerusalem very much. I found on every hand manifestations of the worst kind of religious fanaticism, and with the exception of one or two, none of the shrines appeared to me convincing.

"The Congress was opened with much pomp. We were ushered into the great hall between two lines of French Colonial mounted troops in gorgeous uniforms. The High Commissioner made a subtle speech of welcome, carrying much pro-French propaganda, and then after one or two papers, a champagne buffet was served. At this opening I had the first chance to observe well the members of the Congress, which now numbered about a hundred and seventy. Besides ourselves, there was an American Jew, who was a student of the Oriental School in Jerusalem, about forty French, twenty English, Germans, Swiss, a Chinese, a Japanese, two Russians, two Poles, etc. Among the most notable delegates was the mighty Sheriff of Mecca in long flowing robes and with a dapper son dressed in occidental clothes.

"In the afternoon of this same day there was a tea for the Congress at the home of Sheik A. Sursock, the richest and most prominent native resident of Syria. Never, no, not even in Palm Beach, have I seen an entertainment of such magnificence. The house and gardens are huge. Marble carvings, rare woods, and Turkish rugs were not lacking. Such a buffet—a whole roast pig, turkeys, jellies, pastries, ices, and, of course, liquid refreshments. The whole Congress was there and about two hundred guests, rich natives, the

governmental and diplomatic sets, and so forth. After the funkeys in picturesque Turkish uniforms had finished serving, we were ushered into the garden where native sword dancers, Egyptian snake-charmers and fakirs entertained us to the squeal of pipes and the beating of hand-drums, until dark. Then came a display of fireworks of the most unusual kind. After all this, we were invited to dinner and danced afterwards. Some tea! This entertainment had a strong element of unreality about it, and I felt as if I had lived some part of a huge extravaganza. Here was Syria, poverty stricken, living in filth and ignorance, stricken with a most terrible revolution, and yet, all this display and luxury existing as if all were right. But I suppose that this has been, is and always will be a striking feature of the Orient.

"The following morning, we started by automobile caravan on our trip into the Syrian desert. We spent the night at Tripoli, the last town of any size toward the desert. At half-past four, the morning of April tenth, we took a train to the town of Homs on the Tripoli-Aleppo Railroad. From Homs the desert stretches away into the horizon. Here we were met by another automobile caravan and a guard of four armored cars, and at eight o'clock started our long trek into the desert. Never have I had a harder or more uncomfortable trip. For twelve hours we drove under the blistering sun in a compact group. We could only run fifteen miles an hour owing to the slowness of the armored cars, and the cloud of dust was choking. To make it worse, every few minutes the whole convoy had to stop while a tire was changed. We drove into Palmyra at nine at night, to find more hardships. There were not enough accommodations to go around, so that some of us had to stay in the mud "Palace" of the local Sheik. I slept two nights in my clothes, wrapped in a camel blanket alive with lice and fleas and with my revolver wrapped in my sweater as a pillow. Then on top of all this, the camel caravan with our supplies had been held up by military order owing to an engagement in the hills. So we fed on goat meat and coarse bread from the Commissary of the Fort. No water to wash in—just enough to drink.

"Palmyra, even from camel-back in the scorching sun, was magnificent. The great temple of Baal, ruined as it is, has within its walls an Arab village filling it as wasps do old woodwork. The return trip to Tripoli was much less severe, as the French sent down a flying machine to convoy us, and we could run much faster.

"The following day we made a trip into the country of the Alouits. We drove from Tripoli into the Lebanon Mountains to an elevation of five thousand feet. We found on a mountain in the midst of a fertile plain an imposing medieval chateau, known as Tel-el-Hosan, within which lived the Alouits. It was built, or commenced rather, during the First Crusade by the Order of the Hospitallers. The same Order held it throughout the term of crusading power in Syria, enlarged it, and embellished it. Today it is a huge fortress excellently preserved, with three complete sets of walls each within a moat. The Arab tribe that now holds it has built its mud huts from courtyards to battlements, while cows and goats run about the parapets."

Official interest in art in Spain recently had a manifestation during the seventh centenary of the magnificent Gothic Cathedral of Toledo, when it was decided to establish a museum as an adjunct to the sacred edifice, so that the innumerable treasures now

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forth. informs garden farmers and the a dis- ter all wards. ment of the part poverty with a y and use that ture of mobile e spent ard the tenth, tripoli- stretches nother d cars, to the comfor- ter the only run of the g. To convoy ve into shipships. around, "ace" of clothes, eas and pillow. with our wing to eat and art. No

orching of Baal, a village arn trip ch sent could run

country Lebanon et. We plain an -Hosan, or com- the Order through- charged it, ress ex- of walls holds it lements,

a mani- the mag- it was t to the ures now

hidden in various parts of the Cathedral could be adequately exhibited. The most valuable single item to be thus displayed is the three-volume illuminated manuscript Bible once the property of King Louis IX, Saint Louis, of France. The MS. contains no less than 5,000 miniatures, dating from the second half of the XIIIth century and executed at the period when French miniature painting was at the zenith of its skill and power. A replica of this original MS. is distributed, one volume in each, between the Bibliothèque Nationale in Paris, the Bodleian Library, Oxford, and the British Museum, but it is inferior in every respect to the original.

It is reported from Paris that a savant of the Academy of Inscriptions and Belles Lettres has discovered it is possible to decipher the erased texts of palimpsests by the use of the ultra-violet ray. All previous attempts to read palimpsests with the aid of chemical solutions have proved unsatisfactory. It is hoped in time by this new method to discover traces at least of the lost books of Livy.

Announcements have gone out for the 122nd Annual Exhibition of the Pennsylvania Academy of the Fine Arts. It will open publicly January 30, and close March 20. The canvases will all be those of living Americans, and neither they nor the sculpture shown will have been seen in Philadelphia before.

Spain recently passed a stringent measure forbidding the exportation of any native work of art or architectural treasure. In the past the Peninsula has been a rich and varied field for the collector and antiquarian, and magnificent illuminated manuscripts, early books, ecclesiastical vestments of marvelous beauty, archaeological specimens, masterpieces of painting and sculpture, and even entire edifices, have been purchased and removed by the wealthy connoisseurs of other countries. The last building to be so disposed of is an exquisite little tenth century cloister purchased by William R. Hearst for his California estate. The cloister is a Romanesque structure in the province of Segovia and dates from before 970. Arthur Byne, the connoisseur and españolista, assisted by his wife, Mildred Stapley Byne, the author, is in charge of the removal. The work was arduous and difficult. About forty miles of road had to be built, and the heavy stones moved by ox-teams. The Spanish Government permitted the contract to be completed because it had been commenced before the passage of the law.

An offering of more than usual interest is the sale of the Alphonse Kann Collection, announced by the American Art Galleries in New York January 6, 7, and 8, inclusive. Besides a magnificent group of paintings and drawings by Italian, Dutch, French and English masters, there are bas-reliefs, bronzes and a stone head of unusual force and beauty from Egypt, Greek bronzes and marbles, Gothic unrestored pieces and renaissance sculpture and carvings in polychrome. The collection of Oriental pottery is exceptionally valuable, as it was made at a time when few understood the value of the pieces. They include remarkable specimens of ancient 'Geubri', Rakka, Rhages, Sultanabad and Syrian work, many of them unique, and a series of inlaid bronzes, some of archaeological interest from the Hamadan excavations. Other exhibitions and sales announced by the Galleries are: Spanish Art, Almenas Collection, January 13-15; Grassi Collection of Italian furniture, sculpture, della Robbia pottery, jewelry and textiles,

January 20-22; Cattadori Italian Collection, January 27-29; and the collection of the late Charles A. Gould, consisting mainly of paintings of the Fontainebleau Barbizon School, and American and English painters of the XVIII-XIXth centuries, set for the evening of January 27.

### Comment Upon Dr. Gamio's Report

(Concluded from page 34)

flotsam and jetsam of the world always attracted to the frontiers of civilization. The physiological dangers of racial intermarriage are greatly exaggerated and there is every reason to suppose that interbreeding will in time bring about a far more homogeneous population. The difficulties of a multiplicity of different languages are rapidly disappearing with the very general acceptance of Spanish.

One of the main reasons for an absence of a united and definite public opinion, of a national sense of duty and obligation as well as of enlightenment in general, is a topographical one. The isolation of peoples within certain districts and the ignorance of conditions outside the local centers are brought about mainly by the fact that parts of each country are sometimes separated from the capital by weeks of travel on foot or on mule-back. The entire absence of roads in great sections of southern Mexico and Central America brings with it an isolation hard to realize in this country. Each center has its own problems, its own customs, and its own point of view. The central authority might just as well not exist except for an occasional visit from a government official. National problems nowhere exist so far as the greater number of the population is concerned.

The lack of inter-communication made arduous by high mountains and dense forests thus explains to an extent not usually realized some of the difficulties met with in the countries of our southern neighbors.

## GLOSSARY

(Continued from last issue. For explanations, see issue of June, 1926.)

### A

**Al'ma-gest:** (1) the Arabic translation, dating from 827, of Ptolemy's astronomy, which enunciated the geocentric theory of celestial movements; (2) any mediaeval work of authority dealing with science [Ar. *Al*=the, and Gr. *magistos*=great].

**A-lo'a-dae:** in Gr. mythol., Otus and Ephialtes, giant sons of Poseidon by Iphimedia; when 9 years old they threatened to storm heaven and drive out the gods by heaping Mt. Ossa upon Mt. Olympus, and Pelion upon Ossa; killed on the island of Naxos, Greece.

**A-lo'eus:** Iphimedia's husband.

**a-lop'i-ki:** (Gr.) a fox-skin, used in ancient Thrace as a head-covering.

**Al'mo:** the ancient name of the brook Aquataccio, on the south side of Rome.

**Al'o-sy'dny:** in Gr. mythol., the Sea-born, one of the names of Amphitrite.

**Al-phe'us:** (1) in Gr. mythol., the river-god who loved the nymph Arethusa, followed her under the sea when, changed into a stream, she fled him, and bubbled up beside her in the harbor of Syracuse, Sicily; (2) a river (today the Rousphia) in the Peloponnesus.

**al-ru'na:** (1) among the ancient Germans, a priestess; (2) an idol for house-use among certain N. Eur. tribes of early times.

**Al-si'um:** the village now called Palo, one of the most ancient towns of Etruria, near which Pompey had an estate.

**Al'svid:** in Norse mythol., one of the Sun's pair of horses.

**al'tar-mound:** a mound whose central section or heart indicates its ancient use for worship or sacrifice.

**Al-thæ'a:** the wife of King Oeneus of Calydon, and mother of Meleager.

**Al'tis:** the grove sacred to Zeus near Olympia, where the Olympic games were held, beginning in the VIIIth century B. C.

**Al'y-at'nes:** the king of Lydia and father of Croesus.

**al'y-tarch:** in ancient Greece, the official charged with keeping order at the Olympic games, and in later times the superintendent or overseer of any public athletic contest.

**Am'a-lings:** the royal strain of the ancient Goths; afterwards, until the end of Theodoric the Great's reign, rulers of the Ostrogoths or East Goths.

**Am'al-thæ'a:** (1) in Gr. mythol., the goat whose milk nourished the baby Zeus, and whose horn, broken off by the god, became the cornucopia or emblem of abundance; (2) in other versions of the fable, the nymph who nursed the infant god; (3) that Cumæan Sybil tradition said sold her Sybilline Books to Tarquinus Superbus.

**A-man'ti-a:** a Greek city of classic Illyria, now called Nivitza.

**Am'a-ry'lis:** (1) a proper name; (2) in Theocritus' *Idyls*, Vergil's *Elegies*, and other classic pastoral verse, the name used for a shepherdess or country girl, thus denoting a simple, rustic type of heroine or sweetheart. (Gr. =sparkle).

**A-mas'tris:** (1) Xerxes' wife; (2) a Persian queen, successively wife to Craterus, Herodean Dionysius and Lysimachus, who died B. C. 288.

**a-mau'ta:** the Aztec term [Wilson, *Prehistoric Man*, II, 50] for an historian or chronicler.

**Am'a-zon:** in Gr. mythol., one of the fabled tribe of female stalwarts of Scythia who so often fought the Greeks (Gr., *a* privative, and *mazos*=lacking the breast, which legend declared the Amazons got rid of on the right side since it interfered with using the bow in sport and war).

**Am'bar-va'li-a:** in ancient Rome, a festival and sacrifice to Ceres, goddess of harvests, for renewed fertility of the earth, the animals offered the goddess being led about the fields before they were sacrificed.

**Am-bir'i-us:** famous Ro. actor, L. Ambirius Turpio, contemporary with Terence.

**Am-bra'ci-a:** the ancient capital of Epirus, Greece, which Augustus destroyed.

**am-bro'si-a:** (1) in both Gr. and Ro. mythol., the food of the gods, which bestowed immortality (at times referred to as a drink and at others as an ointment by whose external application beauty as well as immortality was secured); (2) figuratively, any especially delicate food or drink.

**am-bro'si-al:** of the nature of ambrosia; hence, fragrant, delicious, godlike, etc.

**am'bry:** (1) in eccles. archit., a small cupboard or niche, in either the altar itself or a nearby wall, for keeping the consecrated vessels, etc.; (2) a book-room, or library.

The words below all appear in articles or book reviews contained in this number. Each archaeological term will appear later in its proper alphabetical position, fully defined and accented.

**ahuehuete:** the Mexican name of the large cypress tree botanically known as *Taxodium mucronatum*.

**anthropomorphic:** man-shaped; having the characteristics or form of human beings.

**baroque:** rococo; that style of architectural decoration which came into being in the early XVIIth century characterized by its fantastic and meaningless overload of decorative elements.

**churrigueresque:** the quality of unsuitable, meaningless and over-rich decoration synonymous with bad taste introduced into Spanish architecture by Churriguera, Ribera and their disciples.

**Edfu:** a city of northern Egypt, on the Nile.

**Esne (Esnah):** a city of northern Egypt, on the Nile, north of Luxor.

**graffito (Plur., *graffiti*):** drawings or inscriptions scratched or engraved, often upon walls.

**lacustrine:** lake-dwelling (people).

**ostraca:** sherds or fragments of ceramics, bearing texts or inscriptions.

**parthenogenetic:** born of a virgin.

**phonology:** the study of letters and sounds, a branch of linguistics.

**plateresque:** in Sp. archit., the "Silvermiths style," characterized by richness and delicacy of ornamentation in florid designs similar to the chasing on silverware of the Sp. Renaissance.

**repoussé:** relief decoration made by hammering the design up from the back of the metal.

**Sahidic:** the dialect spoken by the Copts of Thebes, Egypt.

**velar:** pertaining to the soft palate, and to sounds made by its aid, as, the gutturals *gw*, *kw*, *qu*.

**zoomorphic:** the representation of animals in art, and the conception of men or gods in animal form

## BOOK CRITIQUES

*The Monastery of Epiphanius at Thebes, by H. E. Winlock, W. E. Crum and H. G. Evelyn White. Vols. I and II. Pp. xxvi and 276, xvi and 386. [Vol. I: archaeology by H. E. Winlock; literary material by W. E. Crum.] 103 plates and illustrations. Quarto. The Metropolitan Museum of Art. New York. 1926. Paper, \$12 each; cloth, \$15 each.*

*New Texts from the Monastery of Saint Macarius, by H. G. Evelyn White (Appendix on a Coptic-Arabic MS by G. P. G. Sobhy. Pp. xlviii, 299. 28 plates. Quarto. The Metropolitan Museum of Art. New York. 1926. Paper, \$12; cloth, \$15.*

These massive, beautiful quarto volumes, which constitute Volumes III, IV and V of the Publications of the Metropolitan Museum of Art, Egyptian Expedition, edited by Albert Morton Lythgoe, curator of the Department of Egyptian Art, do honor to the Museum and to the Cambridge University Press.

In the first Epiphanius volume the archaeological and literary material are made to yield a fascinating account of the topography of western Thebes in the 6th and 7th centuries A. D., the Monastery of Epiphanius at that place, and the Theban hermits themselves. Although, of course, the material is from Thebes, the picture here constructed is probably nearly as representative of the life of Egyptian hermits everywhere; and it greatly amplifies the beginning made by Mr. Crum in his *Coptic Ostraca* (1902). Most valuable of the literary remains are actual letters received by the renowned Saint Epiphanius of Thebes, some of which are indeed from the hand of the well known Bishop Pisentius of Keft. Mr. Crum has made a careful and skillful analysis of the phonetic peculiarities of all the texts. This is very much needed; for the Copts apparently spoke many dialects and sub-dialects which were reflected in their attempts to write the literary idiom; and their extraordinary variability of pronunciation is fortunately preserved by their equally extraordinary tendency to spell phonetically. Some of the peculiarities of these Theban texts are "Achmimic" (a for o, e for a), or due to an excessive avoidance of "Achmimic" (o for a, a for e); others are suggestive of the unknown dialect of Esne and Edfu (vowel-duplication, confusion of ouo- and o-). The behavior of the velar and palatal consonants shows either a great mixture of dialects in the Theban

community, or great decay. Apparently there is confusion between the voiced and voiceless (as regularly in Sahidic), and also between the palatalized and unpalatalized (as regularly in Bohairic); and that by the same individual; but perhaps this effect arises from the use of Sahidic letter-values by a Bohairic person (shima has not yet been adopted for his voiceless tch-sound). Both the velars (k, g) and the dentals (t, d) are palatalized. Again, the g has become a y-sound (as in the Berliner "Janz"), or a ch-sound (as in the Silesian ("Könich"). These texts present morphological, syntactic and verbal peculiarities also which make them at times very difficult or impossible to understand. The abnormalities are not, I think, indicative of a single dialect of Thebes—unless a very chaotic one—but of the many dialects of so heterogeneous a community. Greek has become solely an ecclesiastical language.

In the second Epiphanius volume appear some 630 texts from ostraca and papyri, all Coptic but a very few, forty Coptic graffiti and twenty-six Greek graffiti, together with translations of these and of some discarded texts, and critical notes; all done with great care and thoroughness, and with Mr. Crum's bewildering command of the literature of his subject. They are the sources of Mr. Crum's work in Part I.

The Macarius volume contains leaves and fragments discovered by the editor in 1920-21 with parts of the same manuscripts found by Tattam in 1839 and by Tischendorf in 1844. Known texts are usually, and when possible, described and collated. Many texts are new, or new in Coptic. Texts are accompanied by able introductions, translations, and notes. We are now in a monastic community of the 9th-13th centuries, using the Bohairic dialect and writing on vellum and paper, instead of papyrus and ostraca. The long and extremely accurate text of Arabic in Coptic letters will yield much for Coptic phonology.

W. H. WORRELL.

*Classic Concord. As portrayed by Emerson, Hawthorne, Thoreau and the Alcotts. Edited with Biographical sketches by Caroline Ticknor. Illustrated with Drawings by May Alcott. Houghton, Mifflin Co., Boston. 1926. \$7.50.*

No one is better equipped to write of Concord and its countless memories, its distin-

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guished sons and daughters, than Caroline Ticknor, whose personal contacts, through her father's and grandfather's historic publishing house of Ticknor & Fields, brought her in close touch not only with valuable letters and records but with the men and women themselves. Her biographical sketches of this rare literary circle are briefly and entertainingly told, each one an introduction to selections, especially of "their" Concord.

Emerson writes of the "Drum Beats" and the invasion by the British troops in 1775, of the war and peace that followed, and the great event of the opening of the Concord Library at which he made the address, in praise of books. Hawthorne and Thoreau are deftly and convincingly handled by the author, who skilfully blends character and setting to produce an harmonious picture. The Alcott family is also adequately dealt with, and the closeness of its connection pointed out. They lived in Concord after Bronson Alcott's Temple School in Boston failed, and Louisa M. Alcott produced her still living works in their later home, "Orchard House". Here, too, her father founded his school of philosophy. The charming illustrations by May Alcott are particularly apt.

As Miss Ticknor says: "Time may obscure historic Concord . . . may turn the footsteps of the literary pilgrim toward other shrines . . . but in the permanent record of the world's literature, the Concord of Hawthorne, Emerson, Thoreau and the Alcotts will remain beautiful and unchanged as pictured by each magic pen."

HELEN WRIGHT

*Hans Staden: Wahrhaftige Historia und beschreibung eyner Landschaft der wilden nacketen grimmigen Menschfresser Leuten in der neuen Welt America gelegen. Faksimile-Wiedergabe nach der Erstausgabe 'Marburg uff Fastnacht 1557,' mit einer Begleitschrift von Richard N. Wegner. Pp. 211, 8vo. 58 woodcuts, 1 map. Wüsten & Co., Frankfort a/M. 1925.*

In this very appealing and attractive reprint of a sixteenth century German tale of American cannibals, Dr. Wegner has produced a facsimile in black-letter and archaic woodcuts, the whole bound in a parchment wrapper, that delights the soul of the collector, whether or not he be interested in ancient history from the anthropological viewpoint. Hans Staden was one of those sturdy old-time adventurers

for whom the terrors of the uncharted seas and the New World held irresistible fascination, and his journal of his voyages is well worth reading. Notwithstanding the salty tang to his scientific observations, Herr Staden possessed the virtue of direct observation and plain statement, and the book is instructive to a high degree as showing what our forefathers believed. Staden's first voyage was begun at San Tubal on April 29, 1547, and lasted until Oct. 8, 1548. Again he set forth, in 1549, and was gone until 1555. From Hamburg he went to Portugal and then exploring in Spanish and Portuguese vessels, with Brazil and the neighboring portions of America as his principal goals. Some of the woodcuts are as naif as could well be imagined, even for the times. Dr. Wegner's scholarly annotations and scientific discussion of the journals are characteristically painstaking and minute.

*Prehistoric Aigina. A History of the Island in the Bronze Age.* By James Penrose Harland. Pp. xii, 121. Librairie Ancienne Honoré Champion, 5 Quai Malaquai, Paris. 1925.

The author explains that the Bronze Age lies before the period of written documents in this region, hence his choice of *Prehistoric Aigina* as a title. While a Fellow of the Archaeological Institute of America in the American School of Classical Studies at Athens, he took advantage of the opportunity to visit the island of Aigina, and the intimate knowledge thus gained is reflected in the work. Aigina lies in the center of the Saronic Gulf approximately equidistant from the shores of Attika, Megaris, Korinthia, and Argolis. The island, which has an area of about eighty-five square kilometers (33 square miles), was conquered by the Athenians in 457 B. C.

The three sites which have been thoroughly investigated are: (1) The site of the Temple of Aphrodite in the northwest corner of the island near the modern town of Aigina, called by the author the "Northwest site"; (2) The site of the Temple of Aphaia in the northeast corner; (3) The Oros, or Mt. Hellenion, in the southern corner forming the apex to the island triangle.

In addition, graves have been excavated in various parts of the island. The only fully published site is that of the Temple of Aphaia (Fürtwängler et al, *Aigina: Das Heiligtum der Aphaia*, 1901-1905). Harland was fortunate, however, in being given access to the

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*Apotheke* of the museum in the town of Aigina, in which are stored the finds from the excavations on the Northwest site and the Oros. From the results based on a study of this material, and that found by the author as well as the existing literature, "a history, or at least the framework for a history, of the island of Aigina in the Bronze Age," has been reconstructed.

The author makes use of the chronological system devised by Wace and Blegen, with but a single modification—he has made 1400 B. C. (not 1600 B. C.) the dividing point between the Middle and the Late Helladic Periods. The three main divisions of his chronological table are: (1) Early Helladic Period, *ca.* 2500 to 2000 B. C.; (2) Middle Helladic Period, *ca.* 2000 to 1400 B. C.; (3) Late Helladic Period, *ca.* 1400 to 1100 B. C.

A few entire pottery vessels and several dozen sherds that are characteristic of the Early Helladic Period have been found on the Northwest site, attesting to its occupation by man in the first period of the Bronze Age. The pottery from this site is similar in style and technique to the Early Helladic wares found on the mainland at Korakou, Zygouries, Tiryns, and elsewhere. The evidence for the occupation of the Northwest site during the Middle Helladic Period is abundant, including pottery, graves, house-walls, and objects of obsidian. The Aiginetan pottery of this period is similar in technique, shapes, and styles to the contemporary wares of the Peloponnesos. Very few sherds of the Late Helladic Period have been found on the Northwest site. But the graves on the highland east and northeast of the site, now marked by the remains of the Temple of Aphrodite, have yielded many Late Helladic vases such as "squat bowls", two-handled beaked bowls, stirrup vases, one-handled jugs, and other vessels, as well as small terracotta figurines, or "Mykenaian" idols; the latter are probably images of a primitive female deity. Harland believes the "Gold Treasure" from Aigina now in the British Museum, consisting of gold pendants, necklaces, bracelets, rings, cups, beads of blue glass-paste, etc., came from a Late Helladic grave. On Cape Perdikkas at the southern end of the island, the author found scanty evidence of a settlement dating from the Early Helladic Period. The Oros, as the conical peak of Mt. Zeus Hellanios is called, is also in the southern part (apex) of the island.

Harland believes that the settlement on the Oros does not antedate the Late Helladic Period. The decorative motives on the sherds found here are for the most part paralleled by those on the typical Late Helladic vases from Korakou, Mykenai, and elsewhere.

The work of Fürtwängler and others already referred to, shows conclusively that the Temple of Aphaia site in the northeast corner of the island was not occupied before the Late Helladic Period. The author resumes his archaeological evidence as follows: (1) Aigina was inhabited from the first settlement in the Early Helladic Period throughout the rest of the Bronze Age and down to the present day. (2) The Bronze Age culture of the island was essentially the same as that of the Peloponnesos. (3) Cultural relations and trade intercourse existed between Aigina and the Kyklades in the Early Helladic Period. (4) The hand-made Early Helladic pottery with decoration in lustrous paint suddenly ceases at about 2000 B. C., forming a break in the pottery sequence. In its stead appear the distinctive wheel-made Gray-Minyan Ware and the Mattpainted Ware. Another break in cultural sequence is noted about 1400 B. C. This second break marks the beginning, or the first wave, of the "Achaian Invasion" and the approximate date of the arrival in Aigina of the worshippers of Zeus Hellanios.

A study of the Aiginetan names and traditions leads the author to conclude that during the Bronze Age the island of Aigina was inhabited in turn by three different peoples: (1) Aigaians (Early Helladic), speaking a non-Indo-European dialect and worshipping "Aigaios"; (2) Minyans (Middle Helladic), speaking an Arkadian dialect and worshipping Poseidon; (3) Achaians (Late Helladic), speaking a Proto-Doric dialect and worshipping Zeus Hellanios. Whence came these peoples? What evidence there is points to the coming of the Aigaians from southwestern Asia Minor. The Minyans, on the other hand, came from the north. As for the Achaians, Harland believes they had previously resided for some time in Thessaly and the Spercheios Valley. Students of the subject who have not yet read this little volume should do so, as well as a somewhat smaller work by the same author entitled: *The Peloponnesos in the Bronze Age*. (Harvard Studies in Classical Philology, XXXIV, 1-62. 1923.)

GEORGE GRANT MACCURDY.

## ART AND ARCHAEOLOGY

*The Encyclopaedia Britannica, Thirteenth Edition, three volumes. Edited by J. L. Garvin. Vol. I, pp. xlvi, 1096; Vol. II, pp. xxviii, 1141; Vol. III, pp. xxvii, 1148, Chronological Table of Events (pp. 1149-1178) covering Jan. 1, 1911-July 31, 1926, inclusive, and Index to all three volumes (pp. 1175-1220). Supplementary classified lists of articles and of contributors. Numerous illustrations, including maps and other plates in color. Thick quarto. The Encyclopaedia Britannica, Inc., New York and London. 1926.*

Beginning in 1768 with a first edition which seems today almost quaint in its littleness both physical and mental, the Britannica has passed through twelve ever-growing and ever more valuable editions, to emerge in 1926 with a thirteenth which covers the material included in the small twelfth edition of 1922—given entirely to the world war—and the progress of the entire world in the sixteen years elapsing since the regular eleventh edition of 1910 was issued, and the end of last July. In this new edition of three fat quarto volumes the old and familiar standards of excellence in paper, typography, make-up, printing and illustration are fully maintained, and the book opens in one's hands with a friendly and accustomed touch. But as one works through the pages the conviction grows that notwithstanding its tremendous staff of contributors of every race and every shade of opinion, the editor has been able to affix the Britannic hallmark ineradicably. Here and there a page reads strangely to an American, since it may be assumed that by far the greater part of the edition will be sold in a country which does not emerge as preponderantly Britannic.

But objections of this sort—and there are several which might be made—are mere gnats in the sun. To carp at such a magnificent and, in general, sound, comprehensive presentation of fact is idle, for in comparison with other encyclopaedias, the Britannica is in the position of the *America* at the end of the famous cup-race: "There is no second." Within the 3,385 pages of the new volumes more facts are presented comprehensively, and with a broader consideration of the world outside of Britain, than ever before. It is this very fact that makes fair the criticism in-

evitable from thinking readers and students. The question of editorial judgment is the matter at stake, rather than the omissions, some of which are most perplexing.

In the contributions dealing with biography and engineering there is much to interest even the reader interested only in good literature, while the technical matter is much of it fresh and, as always, authoritative. Where it can be done, accordingly, the ancient dry-as-dust method familiar to all consultants of encyclopaedias, has given place to writing at times brilliant without in any way evading terse statement of the most difficult problems.

One of the most noteworthy series of articles is the archaeological section, which begins with the "General Survey" by Professor J. S. Myers of New College, Oxford. The names of the contributors to this section are enough guarantee of its interest and importance. Among these are A. J. B. Wace (Greece and the Eastern Mediterranean); A. von Le Coq (Central and Eastern Asia); F. W. Hodge (North America); H. J. Spinden (Mexico and Central America); Marshall H. Saville (South America); Gilbert Murray (Greek Literature); Professor T. E. Peet of the University of Liverpool (Egypt, Tutankhamen, etc.); Tenney Frank (Italy and the Western Mediterranean); O. G. S. Crawford, Archaeology Officer, British Ordnance Survey (Air Survey), and many others equally eminent. Professor Breasted receives a brief biography, which fails to mention his epigraphic work in Egypt during the past two years, a full account of which he contributed to *ART AND ARCHAEOLOGY* in November last (XXII, 5; 155-166). Dr. Gamio is neither indexed nor mentioned in the article on Mexico. The American omissions are astonishing in their comprehensiveness, and many a perfectly familiar name is either relegated to a tiny footnote, bibliography or not included at all. Nevertheless, these are the greatest and most compact volumes ever printed, and the book which will make no wars, influence none for or against any political or religious creed, change no financial or physical conditions anywhere in the world, remains far and away superior to any other single literary work of man.

ARTHUR STANLEY RIGGS.



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